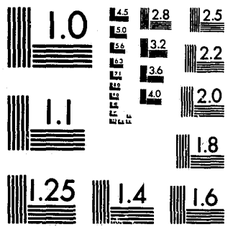


ARSON INVESTIGATION AND PROSECUTION:

A Study of Four Major American Cities

Theodore M. Hammett, Project Director
Deborah Day Emerson, Deputy Project Director

Contributing Authors:
Herbert Weisberg
Judith D. Feins
Jan Schreiber

August 15, 1983

This project was supported by Grant No. 81-IJ-CX-0077 awarded by the National Institute of Justice, U.S. Department of Justice to Abt Associates Inc., Cambridge, Massachusetts. The data presented and views expressed are solely the responsibility of the authors and do not reflect the official positions, policies or points of view of the National Institute or the Department of Justice.

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

Table of Contents (continued)

List of Tables and Figures

ACKNOWLEDGEMENTS

Numerous individuals and organizations made important contributions to this project and it is a pleasure to acknowledge them here. First, I would like to express my deep appreciation to the entire Abt Associates project staff. Special thanks are due to Deborah Day Emerson and Deborah Welch. Debbie Emerson served as Deputy Project Director and was deeply involved in all phases of the work. In particular, her management of the complex and challenging on-site data collection effort was truly magnificent. Deborah Welch was the project secretary and she produced virtually flawless typescript from drafts that would be illegible to most ordinary mortals. I am grateful to her for her patience and professionalism.

A number of other Abt staff members deserve recognition. Judith Feins was the guiding light in the design of the data collection instruments and the quantitative analysis of case record data. She also carefully reviewed the entire draft report and made numerous helpful comments. Herbert Weisberg skillfully carried out the multivariate analyses and wrote the sections of the report summarizing the results of those analyses. Jan Schreiber assisted with follow-up site visits and made extremely helpful contributions to several chapters of the final report. Nancy Ames reviewed the Executive Summary and made a number of useful comments on it. Moreover, as Deputy Area Manager of Abt Associates' Law and Justice Area, she provided a great deal of encouragement and management support throughout the project. Karen Rich provided skillful programming support and Cheryl Vernon of Abt's Survey Research Group oversaw the coding and data preparation phases. Nina Rikoski assisted with early research design activities and site visits and managed the case record data collection in one site.

Our grant monitors at the National Institute of Justice were unfailingly helpful and supportive. Sidney Epstein and Linda McKay saw the project through the data collection and analysis stages and Bernard Auchter was monitor during the preparation of the draft and final reports. We are grateful for their assistance throughout the life of the project.

We benefitted greatly from the expertise of our advisory board. The board included Professor Floyd Feeney, Executive Director of the Center on Administration of Criminal Justice at the University of California, Davis;

Chief Leonard Mikeska, Chief Investigator, Houston Arson Bureau; Charles Nystedt, Special Assistant Attorney General, Arson Unit, Rhode Island Department of Attorney General; and Michael Jacobson and Andrew Auslander, New York City Arson Strike Force. The advisory board was particularly helpful in commenting on the data collection plan and draft final report.

Obviously, this study would have been impossible without access to data on arson investigations and prosecutions. We received tremendous cooperation from arson prosecutors and investigators in all four of our sites: the Bronx, Denver, San Diego, and Cleveland. It is impossible to acknowledge by name all of the people who consented to interviews, provided data, or otherwise assisted us in our work. However, I would like to express my appreciation to some of the key individuals in each city. In the Bronx, we received a great deal of help from Assistant District Attorney Barry Kluger, Chief of the Arson/Economic Crime Bureau and the members of his staff, as well as from Lieutenant Anthony Lopez, supervisor of the Police Arson and Explosion Unit, and the other detectives in the unit. Deputy Chief Fire Marshal Matthew Conlon facilitated our access to fire marshal investigation reports. In Denver, Assistant City Attorney Brian Goral and Chief Myrle K. Wise of the fire department played key roles in arranging our access to investigative files. The supervisors of the Denver Arson Bureau, Captain Donald Lopezi and Captain Jim Persechitte, and the investigators on their staff were all extremely helpful and cooperative. At the Denver District Attorney's Office, Brooke Wunnicke, Thomas Casey, Richard Spriggs, Christopher Munch and numerous other attorneys were particularly helpful in arranging our access to case files and discussing with us various aspects of arson prosecution. In San Diego, we received great cooperation and assistance from the supervisors of the Metro Arson Strike Team--Captain Jim Sewell and Captain Jim Raines of the San Diego Fire Department and Sergeant Gary Learn of the San Diego Police Department--and the investigators on their staff. At the San Diego County Sheriff's Arson and Explosion Unit, Sergeant Arthur Hauer and Sergeant Conrad Grayson and the other detectives were extremely helpful. On the prosecution side, former San Diego special arson prosecutor George DuBorg provided a wealth of valuable information, as did his successor, Frank Brown. Janet Frazer of the District Attorney's Office provided access to invaluable computerized data on arson cases and other felony prosecutions.

Finally, in Cleveland, Director of Public Safety Reginald Turner facilitated our access to investigative records. We received a great deal of help from Sergeant Jim Dunn, supervisor of the Police Arson Unit and the other detectives in the PAU, as well as from Battalion Chief Lawrence Sheehe, supervisor of the fire department's Fire Investigation Unit and the other FIU investigators. First Assistant Prosecutor Joseph Donahue of the Cuyahoga County Prosecuting Attorney's Office coordinated our interviews and access to case files and numerous other attorneys provided valuable information.

The case record data from the four sites were collected largely by local data collection assistants. This task involved painstaking examination of often lengthy and complicated case files. We were fortunate to have the assistance of a remarkably diligent and responsible group of data collectors: Joel Yankiver and Edwin Alomar in the Bronx; Diana Blair and Allen Weiner (a summer intern in the District Attorney's Office whose services were furnished at no cost to the project, for which we are most grateful) in Denver; Howard Rayon in San Diego; and Cudore Snell and Scott Armour in Cleveland.

It is our hope and belief that the efforts of all of these people have contributed to a report which will be useful to prosecutors and investigators in their continuing struggle to combat arson in the United States.

Theodore M. Hammett
Project Director
August 1983

EXECUTIVE SUMMARY

BACKGROUND AND METHODOLOGY

Arson is a serious problem in the United States, although precisely estimating its scope has, in itself, proven to be difficult. The Federal Emergency Management Agency estimates that in 1981 there were 176,900 incendiary and suspicious fires in structures. These fires cost 880 civilian lives and almost $2 billion in property damage. Arson ravages communities, terrorizes neighborhoods, and costs the public billions of dollars in lost tax revenues, fire suppression and investigation outlays and other government expenditures, and increased insurance premiums.

Despite increasing general interest in arson in recent years and a general perception that arson is a particularly difficult crime to investigate and prosecute, there has been relatively little systematic study of the actual patterns and strategies of arson investigation and prosecution. As a result, the National Institute of Justice (NIJ) recently funded two major studies of these subjects. This report presents the findings of the study of arson prosecution, carried out by Abt Associates Inc. under a grant from NIJ.[1]

The study was carried out in four major urban jurisdictions with large and varied arson caseloads: the Bronx (Bronx County); Cleveland (Cuyahoga County); Denver (City and County); and San Diego (San Diego County). The sites were chosen to represent a diversity of socio-economic climates and types of perceived arson problems as well as a range of arson investigation and prosecution structures.[2] Data collection included interviews with key actors in arson prosecution and investigation and examination of investigators' and prosecutors' files in 884 recent cases.

We studied cases entering the process (fires determined to be arson), in order to document arson caseflow from start to finish. We also included

---

[1] The other study, which focused on arson investigation, was conducted by the International Association of Fire Chiefs and Ryland Research, Inc. See "Managing Arson Control Systems: A Study of Arson and Anti-Arson Efforts in a Selected Sample of Jurisdictions" (Report submitted to the U.S. Department of Justice, National Institute of Justice, 4 Vols., April 1982). This report is available through the National Criminal Justice Reference Service (NCJRS), Rockville, MD.

[2] An overview of the structures and processes of arson investigation and prosecution in the four study sites may be found in Chapter 2 of the full report.

enough cases to permit full examination of the process of prosecutorial screening of arson cases and analysis of reasons for case declinations. Finally, we fulfilled the basic mandate of the study by including a large number of cases accepted for prosecution, so as to permit identification and analysis of the factors associated with various case outcomes. Thus, a three-part case sampling design was developed. In each site the following three samples were selected:

1. prosecution sample: 100 recently disposed arson cases;
2. investigation sample: a simple random sample of 100 fires investigated and determined to be arson; and
3. supplemental sample of declined cases: all declined arson cases from the investigation sample period.

These samples allowed us to gather case-level data for documentation of arson caseflow and analysis of case outcomes. Qualitative information obtained from in-depth interviews augmented our understanding of the contextual factors and individual decisions involved in each jurisdiction's processing of arson cases. The synthesis of quantitative and qualitative data was designed to yield a full comparative picture of the process of arson adjudication in four representative jurisdictions.

The remainder of this Executive Summary presents the major findings and recommendations of the study. Its organization follows that of the final report and serves as a guide to the larger volume.

CASE CHARACTERISTICS AND ARSON CASEFLOW SUMMARY

Chapter 3 of the report describes the basic characteristics of the arson cases included in the study and summarizes the key caseflow findings from this data set. The description of the cases sets a context for the analysis and conclusions of the study. The caseflow data show the progression (and attrition) of cases at the key decision points in their processing.

The major findings presented in Chapter 3 are the following:

Case Characteristics

- Most of the cases in the randomly selected investigation sample involved single fire incidents in structures. The

structures involved were most often residential and in use (includes buildings in use but unoccupied at the time of the fire) as opposed to vacant.

- Only 3 percent of the randomly selected cases involved death or injury. Dollar-loss was relatively low overall (the median was $500); however, the median dollar loss was much higher in fraud cases ($10,000).
- It required, on average, approximately seven months (220) days to investigate and prosecute the sampled cases. The mean case investigation time was slightly over one month (40 days); however, the median was zero, reflecting the fact that over one-half of the arrested defendents were appehended the same day the fire occurred. Mean prosecution time was six to seven months (204 days), and median prosecution time was 129 days.

Investigation and Prosecution Caseflow

- Measured as a percentage of fires determined to be arson, prosecution and conviction rates are extremely low (7 percent and 4 percent, respectively, across the four study sites). These figures are consistent with other incident-based measures of arson case outcomes.
- Measured as a percentage of arson cases accepted for prosecution, conviction rates are similarly high to those found in other categories of criminal cases (79 percent, across the four sites).
- Thus, most arson cases are eliminated from the possibility of prosecution during the investigation stage (particularly between the determination of arson and presentation of the case to the prosecutor); the case attrition during the prosecution stage is comparatively insignificant.
- A comparison of motive breakdowns in the randomly selected investigation sample and the sample of prosecutions suggests that fraud and vandalism cases are more difficult to move from investigation to prosecution than are spite and pyromania cases. Spite-and-revenge cases constitute one-half of the cases accepted for prosecution.
- The sharply differing caseflow patterns for the various arson motives suggest strongly that arson is not a monolithic crime, but rather is best understood as a set of virtually discrete crimes with varying levels of solvability and requiring different investigative approaches depending on the motive and modus operandi of the perpetrator.
- In three of the four study sites, trial conviction rates were substantially lower than overall conviction rates. Similar discrepancies do not appear in studies of other types of criminal cases. Thus, while other factors (such as filing and trial/dismissal policies) may be involved in causing this discrepancy, a more likely explanation is that convictions are simply more difficult to win in arson trials than in other criminal trials.

- Of the convicted defendants with known sentences, 53 percent received prison sentences with an average term of 23 months (the range was one month to 16 years), 10 percent received only suspended sentences, 18 percent received only probation, and 19 percent received other sentences such as fines and requirements to make restitution or perform community service.
- Only about one-fourth of convicted defendants in Denver received jail/prison sentences, while almost half received other types of sentences--largely deferred judgments. At the other end of the spectrum, almost 80 percent of the convicted defendants in San Diego received jail or prison sentences. In the Bronx and San Diego, probation was the most common alternative to prison, while in Cleveland, suspended sentences were more commonly used. San Diego's convicted defendants received jail or prison sentences more often than defendants in the other sites, but the average term imposed in San Diego was shorter--14 months. Average jail/prison terms in the Bronx, Denver and Cleveland were 21 months, 30 months, and 35 months, respectively.
- Defendants in fraud cases were more likely to be convicted on an arson charge and on the most serious arson charge alleged than were defendants in other types of arson cases. Neverteless, the sentences imposed on convicted fraud arsonists were no more severe than those imposed on defendants otherwise motivated. Indeed, the rates at which convicted defendants were sentenced to prison were remarkably consistent across the four major motive categories (51 percent to 67 percent), as were the average terms of those prison sentences (18 months to 24 months).

THE INVESTIGATIVE PROCESS: GETTING CASES TO PROSECUTION

The possibility that an arson will result in charges being filed and that those charges will result in a conviction is very remote at the beginning of an investigation. Since so many cases fall out during the investigative stage, it is helpful to examine this process in detail to determine where the weaknesses lie and what strategies might result in more arson prosecutions. This is the subject of Chapter 4 of the report.

The Key Components of an Arson Investigation

Section 4.1 discusses the three key components of an arson investigations: developing evidence on the incendiary origin of the fire; gathering evidence on motive; and identifying a suspect and linking the suspect to the crime. The major findings and recommendations of this section are the following:

Findings

- Although the strength of the evidence on incendiary origin can cause serious problems at the prosecution stage, it appears to receive little attention after the very initial stage of arson investigations. Once the cause determination is made, prosecutors and investigators tend to treat it as a fait accompli rather than evaluating the evidence of incendiary origin for its potential persuasiveness in court. This raises an important general issue: the standards for evidentiary strength necessary to pursue an investigation (or clear a case) may be less stringent than the requirements for an effective court presentation. This discrepancy in standards can lead to problems if the case reaches prosecution and trial.

- Our data show a surprisingly low level of reliance on laboratory analysis of fire debris in the establishment of incendiary origin. Laboratory analysis was requested in only 7 percent of the randomly selected investigations.

- The motive for arson receives significant investigative attention although it is often very difficult to determine, and fires are sometimes prematurely attributed to a certain motive category without sufficient consideration of other possibilities (e.g., vacant building fires assumed to be the result of juvenile vandalism without investigation of possible fraud motive).

- The most critical and difficult aspects of arson investigation are identifying a suspect and linking the suspect to the fire. (Apprehension of a suspect occurs in most solved cases within 24 hours of the fire. Few cases that remain unsolved after 24 hours are ever solved.) The difficulties at this stage of the investigation are attributable to the following factors:

  --Modus operandi. Arsonists usually act surreptitiously. Some arsonists are not even physically at the scene at the time the fire starts; others can claim to have been legitimately and innocently at the scene.

  --Motive. Suspects are easier to identify in spite-and-revenge arsons than in vandalism and fraud arsons. In pyromania cases, it is difficult to attribute motive without having a suspect in mind.

  --Witnesses. Eyewitnesses are rare in arson cases; much more common are witnesses as to opportunity. The strength of such evidence depends largely on how close in time and place it can link the suspect to the fire.

  --Type of property burned. Suspects are much more commonly identified in arsons of buildings with persons present at the time of the fire than in vacant or unoccupied buildings.

Recommendations

- In general, investigators should assume in building each case that it will ultimately go to trial. Thus, they should evaluate all evidentiary elements for their persuasiveness in a court presentation.

- While some observers downplay the importance of physical evidence in establishing incendiary origin, we share the view of many investigators and prosecutors who believe strongly that samples of fire debris should be collected and analyzed in as many cases as possible. This can assist the prosecution in several ways, depending on the theory of incendiary origin being presented in the particular case. For example, laboratory analysis can be used to support contentions that accelerants were or were not used and to rebut defense arguments that legitimately present flammable materials caused the fire to spread. Moreover, collection and analysis of physical evidence, regardless of the result, is important in establishing that a complete crime scene examination was performed.

- At the same time, undue emphasis should not be placed on the acquisition of sophisticated and costly laboratory equipment as a panacea for the problem of establishing incendiary origin. Careful and thorough scene examination reports, effective expert testimony, convincing laboratory analysis, and generally logical and intelligible court presentations (utilizing diagrams, photographs, or even videotape) are all essential to proving this crucial first element of an arson case.

- It is important that all possible motives be considered. Obviously, resource constraints and the relative importance of the evidentiary elements play a role in this process. Not all arsons can be investigated with the same intensity. In addition, while motive evidence is important, it will rarely produce a prosecutable case by itself or even in combination with strong evidence of incendiary origin. There must almost always be evidence linking the defendant to the commission of the arson. However, keeping these considerations in mind, certain key inquiries should be made. In cases of structural fires, there should be a check on the status of insurance and any possible motive that the owner might have for burning the property.

- Another possible aid to motive determination is the development of a profile of arsons by motive category, according to fire characteristics such as point of origin, material ignited, and use of accelerants or ignition devices. Investigators in all jurisdictions probably have in mind a set of fire characteristics indicating particular motive types, but it might be helpful to systematize such "profiles" and to provide them with some empirical underpinning.

Arson Investigation Case Management

Section 4.2 of the final report discusses the major aspects of arson investigation case management: selection of cases for follow-up investigation; follow-up on suspects and leads; disposition of arson investigations--termination without results versus presentation to the prosecutor; and prosecutor involvement in investigations. The major findings and recommendations of this section are as follows:

Findings

- Selection of cases for follow-up is strongly influenced by caseload pressures and decisions regarding allocation of limited resources. Investigative resources do not seem to be wasted on cases with little likelihood of solution. On the other hand, follow-up is largely limited to cases with immediately available suspects, leads, or informant information; as a result, some potentially promising cases may be bypassed or overlooked if their possibilities are not immediately apparent. This may be particularly true of arson-for-profit cases, which generally take more time and resources to develop.
- Because of public pressure, fire seriousness also affects follow-up decisions, but fire seriousness does not significantly increase the likelihood of suspect identification.
- In a surprising number of cases (15 percent of cases not presented for prosecution), file data suggested that investigators failed to follow-up on tangible leads or named suspects. While some of this is clearly the result of caseload pressures, interviews with arson investigators confirmed that failures to follow-up do constitute a real problem.
- The investigator's decision to terminate a case without results or present it to the prosecutor seems strongly influenced by the presence or absence of evidence directly linking the suspect to the fire. At the same time, many cases with linkage evidence and/or combinations of circumstantial evidence are never presented, suggesting that investigative "pre-screening" may sometimes be too conservative.
- Our data suggest that prosecutor involvement in investigations is rare, despite the literature's virtually unanimous call for such activity.

Recommendations

- Systematic analysis of solvability factors might be used to identify another, perhaps less obvious, set of cases worthy of follow-up investigation beyond those with clear initial suspects or leads. A relatively simple survey of past cases could probably yield a profile of the cases most likely to be solved.
- The problem of suspects and leads "falling through the cracks," which results in part from caseload pressures, should be addressed by instituting regular and systematic review of all active case files. A "tickler file" or periodic monitoring of open cases by investigative supervisors and/or special arson prosecutors are strategies worth instituting for this purpose.
- In view of our finding that investigative prescreening of arson cases may be too conservative we recommend that investigators be more venturesome in presenting cases to the prosecutor both formally and informally.
- Complete, clear, and logical documentation of case development in investigation reports is essential to effective investigative case management and rational prosecutorial screening decisions. Investigators should receive additional training and guidance on report preparation and the information needs of prosecutors;
- Our interview data suggest that the prosecutor's role in investigations should remain largely advisory and consultative rather than directive. However, an aggressive approach by prosecutors may be useful in expanding arson-for-profit investigations when a torch can be used to implicate the property owner. A special arson prosecutor may also help to monitor ongoing investigations so that suspects or leads do not "fall through the cracks."

Arson Investigation Unit Organization, Staffing and Deployment

Section 4.3 of the full report examines the relative effectiveness of various models of organization for arson investigation units. The major findings and recommendations are as follows:

Findings

- Organizational factors are by no means the only influences on investigative performance. However, it appears that divided responsibility models of arson investigation involving both police and fire units are more prone to "turf" struggles and communication breakdowns than are team approaches or units staffed by only one department.

Recommendations

- Based on the above finding, we recommend team and "one-department" approaches over divided responsibility approaches to arson investigation.
- Of course, under any investigative structure, it is crucial that all divisions of labor and responsibility be defined as clearly as possible. This also helps to prevent conflict and ensure that all leads are pursued.

Our analysis of arson investigation structures and processes suggested some further conclusions and recommendations related to investigation unit staffing levels and deployment. These are as follows:

- An obvious response to the heavy drop-out rate of arson cases at the investigative stage is to advocate increases in investigative staff. However, given budgetary constraints in most jurisdictions, this is extremely unlikely to occur. Moreover, our data show that many of the unsolved arsons occur in vacant buildings or other situations in which no witnesses or information are available to investigators. Such cases may be essentially unsolvable, no matter how many investigators are available. Thus, we would recommend, in most instances, that careful cost-benefit analysis of expected changes in clearance rates be undertaken before investigative staff is increased.
- Another possible strategy for increasing investigative effectiveness without necessarily incurring additional cost is redeployment of existing staff to target areas of high arson incidence. Such strategies are of particular relevance to large cities. A pilot program in New York City (the "Red Cap" Program) concentrated conspicuously dressed fire marshals in marked cars in limited areas of high arson incidence. This strategy was found both to reduce arson incidence and to increase the arson arrest rate. Thus, this program seems at once to serve the goals of prevention and deterrence.

PROSECUTORIAL CASE SCREENING

Analysis of caseflow based on our randomly selected investigation sample revealed that while only seven percent of the total sample was accepted for adult prosecution, 76 percent of adult cases presented for prosecution were accepted. Even though the overall rejection rates were quite low, we consider it important to document the structure and process

of prosecutorial screening of arson cases and to analyze the patterns of screening decisions. Chapter 5 of the final report is devoted to prosecutorial screening.

Our analyses were based on the rejected cases from the investigation sample together with the supplemental sample of arson declinations. They were designed to document the screening process and screening standards, illuminate common weaknesses in arson cases presented for prosecution, and suggest structural and procedural mechanisms for developing an effective screening function. Section 5.1 reviews some of the general issues concerning prosecutorial screening: the relative newness and controversial nature of the phenomenon and the wide variety of forms it can assume. The remainder of the chapter is organized as described below.

Timing, Structure and Process of Screening

Section 5.2 disusses the timing, structure, and process of prosecutorial screening of arson cases in the four study sites. The major findings and recommendations are as follows:

Findings

- Prosecutors in all four study sites screen arson cases before filing, although the timing, structure, and process of the screening varies considerably.
- The timing of prosecutorial involvement ranges from sites with frequent informal discussion of cases prior to formal presentation and frequent screening of arrests to sites where cases are rarely discussed with prosecutors until they are fully developed and ready for formal presentation.
- Structural approaches range from fully centralized and specialized screening to entirely decentralized and non-specialized screening.

Recommendations

- Formal presentation and screening should occur before formal filing of any charges in court. This screening approach is more costly and time-consuming for the prosecutor, but it appears that the early application of legal expertise to the screening and charging process achieves greater savings in investigative resources and court costs.

- We recommend centralized/specialized prosecutorial screening of arson cases (in which all arson cases are screened by the same attorney or unit in the office) as the most efficient and effective approach, particularly if it is coupled with specialized or partially specialized prosecution. (Of course, the relative appropriateness of this and other approaches to screening depends on the size of the prosecutor's office.) The centralized/specialized approach has the following advantages:

  --it facilitates development of greater technical knowledge of fire and arson which is necessary to evaluate and screen cases with optimum consistency and effectiveness--for instance, to recognize the technical problems with evidence of incendiary origin in a presented case;

  --combined with specialized vertical prosecution, it may foster more realistic screening, since the same attorney who accepts the case must also prosecute it. Of course, it is important that this concern not lead to overly conservative screening;

  --it facilitates implementing innovative uses of screening such as "preventive prosecution" (holding suspected arson-for-profit cases under consideration in order to deter the suspected arsonist from filing an insurance claim) and tracking arsonists who may enter the system as minor firesetters but move on to setting more serious fires;

  --it facilitates closer working relationships with investigators which are extremely helpful in developing cases, and it permits monitoring of ongoing investigations which helps guard against investigative information loss;

  --it facilitates developing full and detailed knowledge of the arson and related statutes, which is very important in the often subtle and complex charging decisions required in arson cases; and

  --it inculcates a deeper sense of the seriousness of arson, particularly in terms of the actual and potential dangers posed to firefighters, civilians, individual properties, and whole neighborhoods.

- The centralized/non-specialized approach to screening is probably the next most desirable approach. It enables screening attorneys to develop some expertise in evaluating arson cases. However, since the screening unit must handle many other types of cases as well as arsons, the attorneys will not be able to develop the depth of knowledge possible under a fully specialized approach and there will be a greater likelihood of inconsistency in screening decisions.

- Decentralized/non-specialized approach should be avoided if possible, as it seems the approach most likely to produce inconsistent and uninformed screening decisions. However, these deficiencies can sometimes be overcome if investigators cultivate contacts with a few attorneys in the office, making them, in effect, special arson prosecutors.

- Regardless of the screening structure employed, we strongly recommend informal pre-screening consultation between investigators and prosecutors and post-screening feedback from prosecutors to investigators. These activities are extremely helpful in strengthening particular cases, setting investigative priorities, and providing ongoing training on the requirements for an acceptable arson case.

Screening Standards and Screening Patterns

Section 5.3 discusses the screening patterns and screening standards for arson cases observed in the four study sites. The major findings and recommendations are presented as follows:

Findings

- In general, it takes very strong evidence to get an arson case accepted for prosecution in all four study sites. The vast majority of accepted cases included the key elements of a circumstantial case: evidence of incendiary origin, motive, and opportunity. Over 60 percent included direct evidence linking the defendant to the actual commission of the arson, in the form of a confession or eyewitness testimony. The rejected cases were also strong in circumstantial elements, althougn less strong in direct linkage evidence.

- Reflecting the types of evidence generally available in such cases, fraud and vandalism cases accepted for prosecution tend to be more heavily dependent on circumstantial evidence, while spite and pyromania cases tend more often to have direct evidence in the form of an eyewitness or a confession. This finding solidifies the notion that arson is a set of virtually discrete crimes rather than a monolithic crime.

- Anecdotal evidence suggests that fraud cases may be subjected to more stringent screening standards than other types of arson cases.

- There were some cross-site variations in screening patterns. The most important of these was that Cleveland's prosecutions tended to be much more heavily circumstantial than those in the other three cities. Indeed, prosecutors in Cleveland tend to reject only those cases with very obvious evidentiary weaknesses or witness problems.

- Cleveland's extremely high conviction rate based on a heavily circumstantial caseload suggests that convictions can be obtained in circumstantial arson cases with regularity and that prosecutorial screening in the other three sites may be too conservative.

Recommendations

- A more aggressive and venturesome prosecutorial stance may produce a greater deterrent effect, particularly on fraud arsonists, despite possibly reduced conviction rates. We recommend that prosecutorial standards for arson case acceptance be liberalized to admit more "marginal" cases while still meeting minimum legal and ethical requirements for filing. (Typically, the minimum requirement is that a case be able to withstand a motion for a directed verdict of acquittal.)

Elements Involved in Arson Case Screening

Section 5.4 reviews the statutory considerations, evidentiary elements, and case characteristics involved in arson case screening. The findings and recommendations are as follows:

Findings

- In general, we found that arson statutes in the four sites are considered adequate to cover the types of arson offenses faced. Indeed, arson statutes have been tightened considerably in recent years, especially to ensure their coverage of arson-for-profit schemes. However, there are still some gaps in existing statutes. For example, the New York statute does not cover burning wildlands or personal property.
- Although statutory language on this subject is often quite vague, many prosecutors take a conservative view of whether an arson fire has endangered persons or property and are unwilling to consider potential endangerment as a factor in case screening and charging.
- Prosecutorial case screening is often subjective and based on the "gut reactions" of the moment. This can lead to screening inconsistencies.

Recommendations

- Prosecutors should periodically re-evaluate their states' arson statutes to ensure that they cover the types of arson offenses occurring in the jurisdiction.

- Within statutory and resource constraints, prosecutors should adopt a broader view of endangerment so as to accept for prosecution cases involving potential as well as actual endangerment of firefighters and civilians. This issue might be considered in revisions of the arson statute.
- To reduce as much as possible the subjectivity and inconsistency of arson case screening, more formal and specific criteria for case acceptance should be developed.
- The following evidentiary elements and case characteristics should be considered for inclusion in arson case screening guidelines:

  --Evidence of Incendiary Origin. The basic types of evidence in this category are physical evidence (e.g., laboratory analysis of fire debris), expert observation of burn patterns and fire characteristics, and negative corpus evidence (i.e., elimination of accidental causes). Guidelines might specify minimum requirements in each category.

  --Evidence of Motive. In fraud cases, this can involve complex analysis of financial and property records which are often subject to differing interpretations. In spite cases, the key distinction may be between evidence of general hostility (e.g., a previous argument) and specific threats to burn. Motive evidence is less important, but still very useful, in pyromania and vandalism arsons, which are often essentially irrational acts.

  --Evidence Linking the Suspect to the Commission of the Arson. Direct linkage, such as eyewitness testimony or a confession, is obviously preferable to circumstantial linkage, which simply reflects opportunity. The key decision relates to the degree of exclusivity of opportunity. Is there evidence showing that only the suspect could have set the fire or merely, for example, that the suspect was seen in the area one half-hour before the fire started?

  --Reliability and Credibility of Witnesses. This is certainly not an issue unique to arson cases, but screening prosecutors must weigh the effect on witnesses' credibility of prior criminal conduct, animus against the suspect, or other potential ulterior motives for giving testimony.

  --Case Characteristics. In order to target resources or to comply with statutory requirements, prosecutors' offices may wish (or need) to consider categorical criteria, such as the following, in screening arson cases: fire seriousness--dollar-loss, character of fire damage (e.g., charring v. smoke damage), degree of actual or potential endangerment to firefighters and/or occupants; and fire target--car fires, trash fires or other categories may be excluded from acceptance, depending on resource constraints.

- In general, the screening criteria should bring together systematically the basic elements which are already employed, informally, in screening arson cases. The specific levels of proof or evidentiary quality required must be a matter of local determination, based on statutory language and on the jurisdiction's overall standards for case acceptance. However, as noted above, we strongly favor a more venturesome and aggressive screening approach.

PROSECUTION OF ARSON CASES

Despite the recurrent theme in much of the literature that prosecution of arson is extremely difficult, this study shows that under current case presentation and screening standards, most arsonists can be convicted once prosecution is commenced. (If standards for presentation and screening are liberalized as recommended in this study, conviction rates might fall but there would probably be an increased deterrent effect.) Overall, the study found that at least one defendant was convicted on some charge in 79 percent of the prosecuted cases; in 61 percent of the prosecuted cases, at least one defendant was convicted of an arson charge; and in 37 percent of the cases, at least one defendant was convicted on the most serious arson charge filed. Although very few arson investigations ever lead to adult prosecution (seven percent of the cases in the randomly selected investigation sample), those that do display conviction rates comparable to those found in most other felonies.

Chapter 6 of the report discusses the outcomes of arson cases that are accepted for prosecution and assesses the various organizational structures for arson prosecution. For contextual purposes, Section 6.1 presents an overview of felony case processing in the four study sites. Sections 6.2 and 6.3 analyze, respectively, all prosecutions and those reaching trial.

Arson Prosecutions: Outcomes and Evidence Patterns

Section 6.2 presents an overview of the evidence and other case characteristics of all prosecuted arson cases in the study. The major findings are as follows:

- A major reason for the high conviction rates found in the study is that most of the arson cases accepted for prosecution appear to be quite simple and straight-forward. On the other hand, much of the literature suggesting that arson is more difficult to prosecute than other crimes has focused on problems typically posed by complex fraud arson cases.

These include the following: the technical problems associated with establishing incendiary origin, the intricate and painstaking investigation necessary to establish a fraud motive, the normal absence of a direct human victim, the frequent lack of witnesses, and the rarity of physical evidence linking the defendant to the fire. Arson-for-profit cases represented only nine percent of the prosecuted cases examined in this study.

- Among all sampled prosecutions, the presence of direct evidence of the defendant's commission of arson (eyewitness testimony or a confession) is the only factor that distinguishes convictions from non-convictions.
- Almost two-thirds of the convictions rested on direct evidence and about one-third on circumstantial evidence. This is somewhat surprising in view of the common opinion that arson cases are overwhelmingly circumstantial in character. At the same time, it shows that convictions can be obtained in circumstantial arson cases.
- As with most felonies, the vast majority of arson convictions result from pleas of guilty.

Arson Trials: Outcomes, Case Characteristics, and Evidence Patterns

Section 6.2 demonstrates that the evidence in the cases ending in convictions was generally very strong, guilty pleas may occur for reasons not entirely dependent on the evidentiary strength of a case. Prosecutors' and defendants' decisions to offer or enter a plea, as part of a negotiated outcome, involve each side's balancing the perceived chances of conviction on the highest charge filed should the case go to trial against the desirability of conviction on a reduced charge with a lighter sentence. Pleas may also occur for largely extraneous reasons relating to other prosecutions. In short, while evidentiary strength certainly is the most important factor in producing guilty pleas, it is by no means the only factor.

At the same time, considerations other than evidentiary strength (e.g., agreements for a defendant to plead guilty in one case in return for dismissal of another) may influence dismissals, determinations of mental incompetency, and certain other non-conviction outcomes. It appears that the purest way to relate evidence to outcomes is to focus on cases going to trial. Thus, Section 6.3 analyzes the characteristics, outcomes, and evidence patterns of arson cases reaching trial. The major findings are as follows:

- Arson defendants going to trial are nearly twice as likely to be convicted than to be acquitted on the merits of the case. Still, the 58 percent trial conviction rate is substantially lower than the overall defendant conviction rate--78 percent. Indeed, in the Bronx, Denver, and San Diego, about one-half of all trial defendants were acquitted.
- Contrary to findings from studies of other felonies or all felonies,[1] the evidence is generally weaker in arson cases going to trial than in arson cases disposed of by pleas.
- Arson cases involving serious fires (death, injury, and/or high dollar loss) are more likely to go to trial than cases involving minor fires.
- Witness problems, defense expert testimony on cause and origin, direct evidence of the defendant's commission of arson, and evidence of motive serve best to distinguish acquittals from convictions at arson trials.
- Interview data suggest that it may be easier to convince a jury to return a conviction if the fire caused severe damage. Several prosecutors have noted that juries and judges are sometimes reluctant to convict if little actual damage was caused by a fire, even if there was great potential for harm to life or property. Judges may be concerned about the court time and resources "wasted" by trial of a case involving a minor fire.

Proving An Arson Case

Section 6.4 discusses the problems that can arise in proving each key element of an arson case: incendiary origin, motive, and opportunity (or direct commission of the crime), with emphasis on cases reaching trial. The section also deals with other factors that can present problems in arson cases, such as unavailability and unreliability of witnesses. The key findings and recommendations in this area are the following:

Findings

- Although evidence of incendiary origin does not receive significant attention during follow-up investigation or prosecutorial screening, this element

[1] See Joan Jacoby et al., Prosecutorial Decisionmaking: A National Study (U.S. Department of Justice, National Institute of Justice, 1982), p. 40.

can cause real problems in arson cases reaching trial, particularly as the defense bar becomes more skillful and aggressive. Cases relying on negative corpus (elimination of accidental causes) without positive evidence of incendiary origin are especially difficult.

- While motive evidence is not a legal element of proof in arson cases, it is considered by prosecutors to be an important ingredient in rendering cases intelligible to juries and one whose absence or weakness can cause serious problems at trial.
- Degree of exclusivity is the key factor in establishing a defendant's opportunity to commit arson. However, in many arson cases reaching trial, the evidence of opportunity rests on testimony that can be undermined by identification problems, alibis, and complex issues of timing.
- Physical evidence tying the defendant to the fire scene is rarely available in arson cases.
- Problems of witness availability and reliability often undermine arson cases reaching trial.

Recommendations

- Prosecutors should be particularly concerned to make their court presentations of the often-complex issues of fire cause and origin as clear and intelligible as possible, making use of diagrams, photographs, and videotapes whenever possible.
- A logical and understandable presentation is particularly important in cases which rely on negative corpus evidence. In such cases prosecutors must be prepared to counter the common defense argument that the fire was caused by careless--but accidental--disposal of a match or cigarette.
- Proving incendiary origin can be rendered easier by using an investigator familiar with the case, or at least generally familiar with cause and origin determination, as an advisory witness who attends the trial and advises the prosecutor on technical issues. Advisory witnesses are particularly useful if the case is being tried by an inexperienced prosecutor or if the defense puts on its own expert witness to offer an alternative explanation of the cause and origin of the fire.
- There are several investigative areas related to development of motive information, in which prosecutors' resources have been brought to bear with some success. Particularly in jurisdictions experiencing serious problems with fraud arson, prosecutors might wish to consider employing accountants and real estate specialists, at least on an as-needed

consulting basis, to assist in researching property transactions and financial conditions of defendants. Such information can be crucial to establishing motive in fraud arson cases.

Prosecution Structure and Arson Specialization

Section 6.5 assesses various organizational approaches to arson prosecution. The major findings and recommendations are as follows:

Findings

- Although analysis of conviction rates does not point to the superiority of any one structure of arson prosecution, anecdotal evidence and interview data suggest that a "specialized screening/ hybrid prosecution" system is preferable.

Recommendations

- We recommend a "hybrid" approach to arson prosecution. Under this system, a specialized attorney or unit screens all arson cases, handles vertically those posing complex or technical issues and passes the rest on to the normal felony processing stream. This approach seems to offer the best of both worlds: specialization and efficiency. There are a number of reasons for this recommendation:

  --The value of specialized prosecutorial screening of arson cases (discussed above).

  --The need for maximizing efficiency in case processing: Under totally non-specialized prosecution structures in large offices, it is almost inevitable that each attorney will handle very few complex arson cases and that the assignments will be widely spaced in time. It is inherently inefficient for each prosecutor to learn--or re-learn--the technical issues involved in these complex prosecutions, but this is what is required under such structures. On the other hand, it is just as wasteful to occupy a highly skilled and experienced arson specialist with the routine cases that constitute the bulk of the arson caseload. Although linkage of the defendant to the crime often poses problems in arson cases, these are generally not problems that are unique in substance to arson cases. We suggest that specialization be limited to cases posing complex technical issues of fire cause and origin or intricate questions of motive, such as those encountered in many arson-for-profit cases.

  --The relatively low conviction rates in arson cases that go to trial. There are problems encountered in presenting effectively at trial the complex and technical issues involved in some arson cases. Specialization might help to improve these skills.

  --The increasing skill and experience of the defense bar in arson cases, which was mentioned by prosecutors in several study sites. This suggests a corresponding need for increasing skill and experience among prosecutors of arson cases. Specialization is the best method of developing and maintaining the required level of skills, knowledge, and experience.

  --Specialized prosecutors' opportunity to become familiar with the arguments used by cause and origin experts typically called by the defense and the consequent ability to counter these arguments more effectively in court.

  --Specialized prosecutors will be in a better position to develop and maintain the close working relationships with insurance companies that are crucial to establishing a flow of valuable investigative information from insurers to public authorities.

- If there is not enough arson work to keep a special prosecutor fully occupied, it may be necessary to supplement his or her caseload with other types of cases or to merge arson specialization with a fraud or economic crime unit whose cases already have many issues in common with arson-for-profit prosecutions (as in the Bronx). These modifications at least ensure that prosecution of complex and technically challenging cases is concentrated in the hands of one or a few attorneys.

In considering each of the findings and recommendations regarding arson cases reaching trial, one important fact must be borne in mind: juries are unpredictable--the best organizational structure and the best developed and presented evidence cannot absolutely guarantee conviction. Prosecutors stress that going to trial is always to some extent a "roll of the dice." However, adoption of the recommendations developed by this study may at least help to maximize the likelihood of obtaining convictions.

SUGGESTIONS FOR FURTHER RESEARCH

A number of suggestions for further research follow naturally from the findings and recommendations of this study. The following represents an agenda of potentially fruitful arson research:

- Systematic Study of the Nature and Extent of Arson. As noted in Chapter 2 of the full report, there are grave problems in arson data collection and significant discrepancies among currently available data sources on the scope and character of arson. It appears that intensive study of a sample of jurisdictions might clarify

the picture and lead to some more reliable estimates of the arson problem.[1]

- Demonstration and Evaluation of Arson Investigative Targeting Strategies such as New York City's "Red Cap" Program.

- Development of a Profile or Predictive Model of Arson Motive from Expanded Data on Fire Characteristics.[2] The present study collected basic fire characteristics but more detailed data would be required to develop a meaningful profile. If it could be developed, such a profile might assist investigators in identifying arson motives and planning subsequent investigation strategies.

- Study of Information Exchange Between Insurance Companies and Public Arson Investigators. Although Arson Reporting-Immunity laws designed to facilitate information flow are in effect in all four states involved in this study, the data show an extremely low level of insurer involvement in the sampled investigations. Since insurers and public investigators can be of great potential benefit to one another, it is worth examining the reasons for the current low level of cooperation and identifying the potential methods for increasing it.

- Analysis of Arson Case Drop-Out and Solvability Factors During the Investigative Stage. Our data suggest that many arson cases are eliminated from the possibility of prosecution through various direct and indirect forms of pre-screening. Intensive study of a sample of investigation units could further illuminate this process by determining how case attrition is distributed according to the following causes: initial lack of suspects; lack of resources to pursue cases; failure to follow-up on tangible leads; and decisions, based on consideration of evidence, not to present to the prosecutor. This analysis might be combined with a study of solvability factors based on a sample of past investigations. This might help investigation units identify categories of cases worthy and unworthy of follow-up investigation.

---

[1] For a possible approach to such a study, see Richard Ku, Theodore M. Hammett, Deborah Day Emerson et al., Arson Control: A Synthesis of Issues and Strategies Based on the Arson Control Assistance Program (Report submitted to the U.S. Department of Justice, Law Enforcement Assistance Administration, 1980), Chapter 1. This report is available through the National Criminal Justice Reference Service, Rockville, MD.

[2] A preliminary profile is presented in Angelo Pisani, "Identifying Arson Motives," Fire and Arson Investigator 32 (June 1982), pp. 18-24.

- Cost-Benefit Analysis of Increasing Investigative Staff. Since it is not clear that additional staff would significantly increase the success rate in arson investigations, it might be advisable to conduct a study in a sample of jurisdictions to devise and test cost-benefit analyses which could be undertaken before deciding to add investigative staff.[1]

---

[1] For a possible approach, see Abt Associates Inc., "Evaluation Options in Arson Control" (Report submitted to U.S. Department of Justice, National Institute of Justice, January 1982), Section 2.2. This report is available from Abt Associates Inc.

1.0 INTRODUCTION AND BACKGROUND

Arson is a serious problem in the United States, although precisely estimating its scope has, in itself, proven to be difficult. To cite but one source, the Federal Emergency Management Agency estimates that in 1981 there were 176,900 incendiary and suspicious fires in structures. These fires cost 880 civilian lives and almost $2 billion in property damage.[1] Arson ravages communities, terrorizes neighborhoods, and costs the public billions of dollars in lost tax revenues, fire suppression and investigation outlays and other government expenditures, and increased insurance premiums.

Despite increasing general interest in arson in recent years, there has been relatively little systematic study of patterns and strategies of arson investigation and prosecution. As a result, the National Institute of Justice (NIJ) recently funded two major studies of these subjects. This report presents the findings of the study of arson prosecution, carried out by Abt Associates Inc. under a grant from NIJ.[2]

This chapter provides an introduction to Abt Associates' research by discussing some of the major themes concerning arson prosecution that recur in the literature and by describing briefly the research design and methods used to carry out the study.

1.1 Common Themes Concerning Arson Prosecution

The most pervasive general theme in the literature on arson prosecution is that arson is a special crime, whose successful prosecution requires

---

[1] FEMA, "Fires in the U.S.: 1980 and 1981 Statistical Summary," (December 1982). 123 firefighters were killed in the line of duty in 1981, but no breakdown is available as to the causes of the fires resulting in these fatalities. These estimates are based on data from FEMA's National Fire Incident Reporting System (NFIRS) and from a survey of U.S. fire experience (based on responses from about 2,840 fire departments of a total sample of 7,832) conducted annually by the National Fire Protection Association (NFPA). The NFPA survey results are reported separately in Fire Journal (September 1982), pp. 68-87.

[2] The other study, which focused on arson investigation, was conducted by the International Association of Fire Chiefs and Ryland Research, Inc. See "Managing Arson Control Systems: A Study of Arson and Anti-Arson Efforts in a Selected Sample of Jurisdictions" (Report submitted to the U.S. Department of Justice, National Institute of Justice, 4 Vols., April 1982). This report is available through the National Criminal Justice Reference Service (NCJRS), Rockville, MD.

a range of special investigative and legal skills, knowledge, and organizational arrangements. This theme is apparent in discussions of arson evidence and the structure of arson investigation and prosecution.

1.1.1 Arson Evidence: Establishing Incendiary Origin and Linking the Defendant to the Crime

Probably the most common argument for the special character of arson is that its very commission is more difficult to establish than is the commission of most other crimes. Because arson so often occurs without an eyewitness, and because many of its perpetrators try to conceal their work, it is argued that a major part of the preparation of the case must be the assembling of evidence that a crime was in fact committed.[1]

A fire by itself is not evidence of arson; there must be evidence that it was intentionally set. Such evidence is required to establish the corpus delicti, or proof that a crime was committed. The literature emphasizes prompt and thorough examination of the fire scene by trained arson investigators. Much of the literature on arson investigation emphasizes collection and analysis of physical evidence. However, a recent study attaches greater importance to development of expert testimonial evidence on the cause and origin of the fire.[2]

In any case, the first requirement for an effective arson investigation is that investigators be called promptly to the scene of all suspicious fires. This, in turn, requires that firefighters and fire officers be aware, through special training and/or experience, of the indicators that a fire was set (e.g., unusual color of smoke, unusually rapid fire spread, multiple origins) and be constantly observant of such indicators during fire suppression operations. The fire scene investigation should begin with interviews

---

[1] John F. Boudreau et al., Arson and Arson Investigation: Survey and Assessment (Washington, D.C.: U.S. Department of Justice, National Institute of Law Enforcement and Criminal Justice, 1977), p. 3 and Chs. V and VI; Harvey M. French, The Anatomy of Arson, (New York: Arco, 1979); Arson-for-Hire: Hearings of the Permanent Subcommittee on Investigations, U.S. Senate, 95th Congress, 2nd Session, August 23-24, September 13-14, 1978 (U.S. Government Printing Office, 1978); International Association of Fire Chiefs, "Managing Arson Control Systems," Section 3.

[2] International Association of Fire Chiefs, "Managing Arson Control Systems," Section 3, p. 3-21.

with firefighters and other witnesses to determine whether any indicators of incendiary origin were observed. Investigators should also take care that no potential evidence of the fire's cause and origin is destroyed or disrupted during the "overhaul" of the scene by the suppression unit.

The investigator's physical examination of the scene emphasizes locating the origin of the fire and identifying indicators of the presence of an accelerant or use of an ignition device. These determinations are usually based on burn patterns, fire spread characteristics or, more obviously, the presence of charred containers that may have contained a flammable liquid or the remains of an ignition device.[1] If presence of an accelerant is indicated, it is even more important to identify the point of the fire's origin, so that samples of fire debris may be taken from that point for laboratory analysis. Sophisticated laboratory analysis using gas chromatography and mass spectrometry can detect trace elements of accelerants in fire debris and, by comparison with "standard" samples of known substances, can often identify precisely the type of accelerant used--sometimes even down to the brand of gasoline. Analysis of physical evidence in arson cases is, in some respects, comparable to the medical examiner's task in a suspected homicide.

All physical evidence collected at a fire scene must be meticulously preserved so that it will not deteriorate or become contaminated. Moreover, the chain of custody must be documented so that the prosecutor can demonstrate that the items introduced in court are precisely the ones that were collected at the alleged arson site.[2]

There are sharp legal limits on the rights of investigators to search a fire scene without a warrant. The United States Supreme Court in Michigan v. Tyler-Tompkins held that seizure of items found in plain view during a search

---

[1]For general treatments of arson evidence, see French, op. cit., and William G. Eckert, ed., The Investigation of Arson, Crime Scenes, and Vehicular Problems, proceedings of the Fifth Western Conference on Criminal and Civil Problems, Wichita, Kansas, 1976.

[2]See, for example, James L. Fetterly, "Legal Aspects and the Alternatives to the Investigator," Fire and Arson Investigator, 30 (July-September, 1979) and 31 (October-December, 1979); and Guy E. Burnette, Jr., and Lawrence W. Smith, Florida Arson Prosecution: A Trial Manual for Florida Prosecutors, Tallahassee, FL: Department of Insurance, Division of State Fire Marshal, 1980.

conducted in the course of extinguishing a fire is legitimate; however, later returns to the scene of an extinguished fire for investigative purposes, unless carried out with the permission of the owner, must be authorized by a search warrant:

> [A]n entry to fight a fire requires no warrant, and...once in the building, officials may remain there for a reasonable time to investigate the cause of the blaze. Thereafter, additional entries to investigate the cause of the fire must be made pursuant to the warrant procedures governing administrative searches.[1]

Actually, many investigators and prosecutors point out that it is not that difficult to gain access to a scene through an administrative warrant or the owner's permission.

In general, the literature emphasizes the technical and legal complexities involved in establishing the commission of arson--and this is only the first of two major parts of an arson case. Indeed, establishing the incendiary origin of a fire is only a prerequisite for the second major evidentiary component, which arson shares with all other crimes: the linking of the suspect with the criminal act. However, this stage is argued to be more difficult and complex in arson cases because of the typical lack of an eyewitness to the firesetting deed and, in some instances, the lack of a victim with an interest in identifying the perpetrator. Indeed, in fraud arson cases, the victim and the perpetrator are one and the same person.

According to the literature on arson prosecution, these characteristics mean that the prosecutor's case must usually be a circumstantial one.[2] The literature suggests that investigation into the background and circumstances surrounding the fire are critical to establishing motive and opportunity. The property owner's financial condition may be very important, since it could

---

[1]436 U.S. 499 (1978) at 511. Much of the discussion surrounding this controversial decision concerns the definition of the "reasonable time" after which owner permission or a warrant must be obtained to return to a fire scene. Policies of investigative units vary substantially on this point. The U.S. Supreme Court has recently granted certiorari in a case involving a warrantless search six hours after the fire was extinguished. Michigan v. Clifford, U.S. Supreme Court case number 82-357. Thus, it appears that a more precise definition of "reasonable time" may be forthcoming.

[2]See, for example, "Circumstantial Evidence vs. Direct Evidence," Fire and Arson Investigator, 30 (July-September, 1979), p. 33.

furnish a motive for his involvement in the crime. His activities in the weeks just prior to the fire often deserve special scrutiny. He may have arranged an alibi so as to be away while an accomplice set the fire. The investigator may need to know the history of property transactions involving the building, the amount of insurance on the property, whether the coverage was recently increased, and the history of property tax payments or arrearages and code violations at the property.[1] All of this may require lengthy, detailed and painstaking research into municipal records, bank records, and the personal or corporate files of the suspect or defendant.

Because there is often no direct evidence establishing that the defendant committed the arson, the absence of circumstantial evidence covering any link in the logical chain can be fatal to the case. When arson-for-profit is suspected, the most difficult link to establish is that between the suspect and the firesetting act.[2] Investigative units in a number of major cities rely for this purpose on "turning" an accomplice or "torch" into a cooperating witness. The law in virtually every jurisdiction requires that testimony from accomplices or unindicted co-conspirators be corroborated, although there are significant variations in the extent of corroboration required. As a result, investigators often "wire" the cooperating witness with a body microphone and have him attempt to induce the target (usually the property owner) to make incriminating statements about their transaction. Ideally, such conversations will also be videotaped by investigators from a concealed location, so as to make the identification as positive as possible.

The literature clearly emphasizes the requirements for investigation of complex arson-for-profit cases. But establishment of other arson motives requires collection of circumstantial evidence as well. For example, hostility between the suspect and the victim--particularly evidence of recent threats or arguments--may suggest a motive of spite or revenge.[3] Interviews with neighborhood residents may reveal that juveniles have frequented a

---

[1] Insurance Fraud Task Force (National District Attorneys Association's Economic Crime Project), Insurance Fraud Manual: A Primer on the Investigation and Prosecution of Insurance Fraud (Chicago, NDAA, 1979); Marvin L. Karp, "The 'Wishbone Offense' - A Two Pronged Attack Against Arson," The Forum, 14 (Fall, 1978), p. 205.

[2] Fetterly, "Legal Aspects."

[3] Verdict: Guilty of Burning: What Prosecutors Should Know About Arson (Bloomington, IL: Illinois Advisory Council on Arson Prevention, n.d.)

vacant building which subsequently burned, thus suggesting a possible vandalism motive. Facts such as these contribute to the pattern of circumstantial evidence the prosecutor needs in order to present a strong arson case. But the literature is clear in its implication that arson is a special crime with special difficulties involved in its prosecution.

1.1.2 The Structure of Arson Investigation

Because arson cases are perceived to involve unique complexities and difficulties, much attention is paid in the literature to the organization of arson investigation and prosecution. These considerations arise from the need to coordinate a variety of professional roles in building an arson case. Good relations between police and fire departments and between investigators and prosecutors are both considered to be extremely important. In short, because of the difficulty in moving arson cases from investigation to prosecution, it is argued that prosecutors need to be concerned about and aware of the most effective organizations and strategies for arson investigation.

Relations between police and fire departments are likely to be particularly complex and problematic. This stems directly from the special nature of arson. Police departments are generally conceded to have more experience than fire departments in conducting criminal investigations: they know how to collect and preserve evidence, how to identify and interrogate witnesses, and in general how to build a criminal case. Moreover, they have more experience dealing with prosecutors and the court system. Fire departments, by contrast, are typically considered to have more expertise than police departments in investigating and determining the cause and origin of fires. As noted earlier, both investigative aspects are considered critical to development of strong arson cases.

Here, however, the issue becomes intertwined with extraneous but nonetheless very powerful, political issues. Two basic patterns may be observed. First, if the police and fire departments in a jurisdiction have a history of struggle over "turf" and resources, then arson investigation is likely to become a focus of this battle. The police department is likely to argue that arson investigation requires the same skills and knowledge as investigation of any other crime. Since the police are clearly more experienced in these matters, the logic of the argument runs, they should have lead

responsibility for arson investigations. Fire departments, on the other hand, typically stress the unique technical aspects of arson investigation, in which they are clearly more experienced than the police. Thus, they argue that the fire department should have lead responsibility for arson investigation.

In other jurisdictions, where arson investigation is generally perceived to be a "no-win" proposition, a very different pattern may emerge: the police and fire departments may each argue that the other should be responsible for arson investigation. This is the classic case of arson investigation as the "step-child" of the police and fire services; the police department argues that it is a fire problem and the fire department argues that it is a police problem. In essence, the positions of the first pattern are now reversed: the police are arguing that arson is a special crime problem best handled by the fire department, while the fire department counters that it is like any other area of criminal investigation performed routinely by the police.

Despite the arguments, few jurisdictions have chosen to vest full responsibility for arson investigation in either the police or fire departments. Most jurisdictions have recognized the fact that both the police and fire departments have particular skills and expertise to contribute to arson investigation. Thus, the most common approach to organizing arson investigation is some form of divided or shared responsibility between fire and police departments. In previous research, Abt Associates developed the following typology of organizational approaches to arson investigation:[1]

- Divided Responsibility between Fire and Police Departments. The most common organization of the arson investigative function is to divide the responsibility between the two departments. Typically, the fire department makes the cause and origin determination and interviews witnesses and occupants. If there is reason to believe that the fire is an arson, the case is turned over to the police department. This may not even be recognized as a division of responsibility with respect to arson investigation, but simply as the routine performance of activities in the two departments. Fire departments usually have responsibility for determining the causes of fires. If in the discharge

[1] Richard Ku, Theodore M. Hammett, Deborah Day Emerson et al., "Arson Control: A Synthesis of Issues and Strategies Based on the Arson Control Assistance Program," (Report submitted to U.S. Department of Justice, Law Enforcement Assistance Administration, November 1981), Section 3.2.1. This report is available through the National Criminal Justice Reference Service, Rockville, Maryland.

of that duty they come to believe that a crime has been committed, they will report it to the police. The police then proceed with an investigation if they believe the case warrants attention.

Where there is a well-developed fire investigation function within the fire department, the division of responsibility may be different, with the fire department conducting some of the follow-up to the scene investigation. Regardless of the exact division of responsibility, the salient characteristic of this organization is that the two sets of investigators belong to different departments, report to different supervisors, and keep separate records.

- Exclusive Fire Department Responsibility. Under this approach, there are two variants, depending on the legal authority of the fire investigative unit and its personnel. In some jurisdictions, fire investigators have arrest powers and thus can carry the investigative process through to its conclusion on their own. Where this is the case, the investigators receive training as peace officers in addition to training in fire investigation. In other jurisdictions, the fire investigators may conduct virtually the entire investigation and prepare the case for the prosecutor, but must rely on the police to perform actual arrests.

  As under all the approaches, the police take jurisdiction over certain aspects of the investigation where other offenses besides arson are involved. For example, in a fatal fire, the police homicide squad will typically take charge of the homicide investigation, while the fire investigators will investigate the fire.

- Exclusive Police Department Responsibility. This is the most rarely used approach to arson investigation. Under it, the police perform the entire arson investigation from the fire scene examination through the identification of suspects, arrest and presentation to the prosecutor.

- Joint Fire/Police Team Responsibility. A joint fire/police unit is defined as a fire/police team under a single supervisory authority responsible for all aspects of the investigation. The supervisory authority may be located in the fire department or the police department or both. The fire and police members of the team still belong to their respective departments. The supervisor need not have total authority over all matters relating to team members' work and careers, but merely the authority to assign and direct arson investigative work. Investigative tasks may be strictly divided between fire and police members or shared completely, but the defining characteristic remains the common supervisory authority. Occasionally, the supervisory authority may be jointly shared by fire and police, but in order for it to be considered a single supervisory authority, decisions must be made jointly by the supervisors.

- Autonomous Investigation Unit. This approach is rarely found. It is defined simply as one which is located outside

of the fire and police departments. It may be located in the prosecutor's office or under the local executive. It may be established to bring together personnel from police and fire backgrounds in a single unit and/or to serve the needs of a multi-jurisdictional area containing a number of independent fire and police departments.

As noted above, the "divided responsibility" approach appears to be the most common one. However, it should be emphasized that mere establishment of divided responsibility (or indeed, any other approach) for arson investigation does not insure that friction between the fire and police departments will be avoided. Indeed, the divided responsibility approach often incorporates seeds of further and even intensified conflict by failing to define precisely where the division lies. Even if the division of responsibility is clearly articulated, it may be a matter of continuing bitterness between the parties.

Ironically, the strongest argument for arson's uniqueness may be the very fact that responsibility for its investigation is a matter of such dispute and that development of an effective arson investigation structure requires a level of cooperation and coordination between police and fire departments that is entirely irrelevant to all other areas of criminal investigation.

1.1.3 The Structure of Arson Prosecution and Prosecutor-Investigator Relations

There is little disagreement in the literature as to the best approach to arson prosecution. Although there is no real empirical evidence on the issue, commentators are virtually unanimous in their endorsement of specialized arson prosecution. Because of the complex and often highly technical issues involved in arson investigation, most writers argue that prosecutors handling arson cases must also have detailed knowledge of this subject. A non-specialized structure, in which arson cases are prosecuted by attorneys also handling a full range of other felony cases, does not expose each attorney to enough arson cases to permit development of the required substantive expertise. Arson cases, this argument goes, should be concentrated in the hands of one or several attorneys, so that they may become steeped in the particular issues affecting arson prosecution. This entire argument seems dependent on the related notions that arson cases are particularly difficult

for prosecutors to win and that, as a result, many prosecutors shun assignment to arson cases.[1]

Not only is it strongly urged that prosecutors' offices designate special arson prosecutors, it is also emphasized that these prosecutors become involved in cases from the very beginning of the investigative stage.[2] Because of the complexities that can be involved in determining the legality of a search, some commentators suggest that the prosecutor who will ultimately take the case to court should actually supervise the fire scene examination. Another argument in support of this strategy is that it will help the prosecutor present to the jury or judge a more intelligible explanation of expert testimony on the fire's cause and origin and a more effective description of the fire scene.

Although police detectives and fire investigators both contribute essential investigative expertise, neither may be skilled at developing or managing evidence in a way that will be useful to the prosecutor. A manual for arson prosecutors in Florida argues that in many instances only the prosecutor will be sufficiently familiar with the elements of proof required to support a charge and that he is therefore in the best position to decide whether a piece of evidence is essential, desirable, or irrelevant.[3] For this reason, personal supervision of the investigation by the prosecutor is cited as unusually important in arson cases. For this reason too, vertical arson prosecution (in which the same prosecutor handles the case from start to finish) is usually considered preferable to horizontal prosecution (in which each phase of the effort--preliminary hearing, grand jury presentation, motions practice and trial, may be handled by a different attorney).[4] This reflects the general belief that vertical prosecution offers advantages in all types of cases.

Because of the subtle distinctions (regarding intent, mental state, property category, nature of fire damage, and potential versus actual endangerment of civilians and firefighters) which frequently bear on charging deci-

---

[1] Ku, Hammett, and Emerson, "Arson Control," Section 3.3.

[2] Burnette and Smith, Florida Arson Prosecution; International Association of Fire Chiefs, "Managing Arson Control Systems," pp. 4-89.

[3] Burnette and Smith, Florida Arson Prosecution.

[4] Ku, Hammett, and Emerson, "Arson Control," Section 3.3.2.

sions in arson cases, the prosecutor's knowledge of statute and case law and ability to assess the strength of the case is considered extremely important from the start. This is another strong argument in favor of specialized arson prosecution. Knowing what the court will require by way of proof, in addition to knowing the technical wording of the statute, distinguishes the prosecutor's skill from that of the police investigator and indicates why most writers agree that the prosecutor should be involved in the earliest stages of arson case development and charging.

In sum, a number of arguments have been adduced for designating specialized arson prosecutors to be involved in cases from the earliest stages through to final disposition. Many jurisdictions have adopted this model or a variant of it. However, prosecutors in some other cities deny that arson is really not unique and that its prosecution requires no special skills or knowledge. In these cities, arson cases are handled by general assignment prosecutors, like most other felonies. The structure may be horizontal or vertical, but there are no formally designated arson prosecutors. Under such systems, some informal specialization may develop. This usually occurs when a prosecutor handles a few arson cases, becomes known to the arson investigators, and becomes receptive to assignment of additional arson cases. Indeed, in some jurisdictions (including one in the present study) such informal specialization can lead to formal specialization.

In any case, both sides in the debate over specialized arson prosecution seem to share a basic assumption: their arguments imply that arson is a monolithic crime, requiring a prosecution structure which is either totally specialized or totally unspecialized. This misses a point which we will stress throughout our report: far from being a monolithic crime, arson is in fact best described as a set of virtually discrete crimes, requiring different investigative and prosecutorial strategies depending on the motive and modus operandi of the perpetrators.[1] Clearly, there are common elements in all arson prosecutions: the need to establish the incendiary origin of the fire and to link the defendant to the fire. However, depending on the motive of

[1] See Angelo Pisani, "Identifying Arson Motives," Fire and Arson Investigator, 32 (June 1982), pp. 18-24; Abt Associates Inc., Program Models: Arson Prevention and Control (Washington, D.C.: U.S. Department of Justice, National Institute of Justice, 1980), p. 5.

the arsonist, these two evidentiary elements may differ in their relative importance. For example, in the investigation and trial presentation of a complex arson-for-profit case, establishing the corpus delicti of the crime may require as much attention as the linkage of the defendant to the crime. However, in a simpler spite-and-revenge case in which the fire was quite obviously set, the problem of linking the defendant to the fire may require much more attention. Moreover, the types of evidence required to link the defendant to the crime may vary significantly, depending on the motive. A complex fraud arson case often involves detailed examination of financial or property records as well as audio-visual evidence of transactions with accomplices or hired "torches." By contrast, a spite-and-revenge arson case is usually much simpler to build--it normally involves testimony from the victim concerning quarrels with or threats by the defendant and testimony from an eyewitness to the firesetting deed or to the defendant's presence at or near the scene shortly before or after the fire started. Many arsonists actuated by pyromania or other mental illness or by feelings of spite or revenge confess to their crimes, whereas very few fraud arsonists confess unless confronted by overwhelming evidence.

In many ways, the investigation and prosecution of arson-for-profit cases is closer to that of other economic crimes or fraud offenses than to that of simple spite-and-revenge or pyromania arson cases. At the same time, the evidence required to build strong spite-and-revenge arson prosecutions is closer to that required in simple assault cases than to the evidence in arson-for-profit cases. Because there are rarely eyewitnesses available, vandalism arson cases may be likened to burglary or to acts of vandalism not involving fire.[1]

These considerations regarding the heterogeneity of the crime of arson add another dimension to the debate over the relative effectiveness and efficiency of specialized and non-specialized approaches to arson prosecution. One of the major objectives of this study is to evaluate different arson prosecution structures. In the following subsection, we outline the research design and methods employed in this in-depth study of arson prosecution in four major American cities.

[1] Chapter 3 of this report offers comparative statistics on arrest rates which support these comparisons of arson cases by various motives with other non-arson crimes.

1.2 Research Design and Methods

1.2.1 Overview of the Research

The National Institute of Justice sponsored this study to document the process of arson adjudication and the flow of arson cases through investigation and prosecution, to identify the factors associated with successful and unsuccessful arson adjudication, and to recommend possible solutions to the recurrent problems encountered in arson prosecution. To address these objectives, Abt Associates designed a research strategy to examine the effects of the following factors on individual arson case outcomes and on overall arson caseflow:

- contextual factors
  - --prosecution structure
  - --investigation structure
  - --relations between prosecutors and investigators
  - --case screening criteria and charging decisions
  - --plea negotiation policies and practices
  - --provisions of arson and arson-related statutes
- case-level factors
  - --fire characteristics
  - --arson motive
  - --depth and scope of investigation
  - --evidence of incendiary origin
  - --evidence linking suspect/defendant to the crime
  - --prosecutor involvement prior to presentation

The study was carried out in four major urban jurisdictions: the Bronx (Bronx County); Cleveland (Cuyahoga County); Denver (City and County); and San Diego (San Diego County). Data collection included interviews with key actors in arson prosecution and investigation and examination of investigators' and prosecutors' files in 884 recent cases. (The case samples are described in Section 1.2.3 below.)

The overall approach was designed to gather case-level data for documentation of arson caseflow and analysis of case outcomes, combined with in-depth qualitative information from interviews to augment our understanding of the contextual factors and individual decisions involved in each jurisdiction's processing of arson cases. The synthesis of quantitative and qualitative data is designed to yield a full comparative picture of the process of arson adjudication in four representative jurisdictions. In the following subsections, we describe briefly the methods used in the major phases of the research.

1.2.2 Site Selection

The four study sites were chosen according to two sets of criteria, applied seriatim. First, to qualify, a potential site had to have the following characteristics:

- it must be a predominantly urban jurisdiction. While rural arson is a serious and growing problem, it was decided that only predominantly urban jurisdictions would be able to meet the next criteria:
  - --it must have a large arson caseload, defined as a minimum of about 100 arson cases accepted for prosecution each year;
  - --it must have a varied arson caseload; that is, its caseload must include arson cases in all motive categories (fraud, spite-and-revenge, vandalism, pyromania) in sufficient numbers to support meaningful analysis;
  - --it must contribute to overall geographical balance among the sites; and
  - --it must contribute to an overall diversity among sites in socio-economic climate and perceived types of arson problems. The Bronx and Cleveland were chosen to represent the older cities of the Northeast and Midwest, characterized by many multi-unit dwellings and perceived to suffer from extremely severe arson problems, particularly of the fraud variety. San Diego and Denver were selected to represent the younger, more prosperous cities of the West and Southwest, characterized by newer building stock with fewer units per building and perceived to suffer less severe arson problems, particularly less fraud arson.

This first set of criteria was used to generate a preliminary list of candidate sites. Then, in consultation with the NIJ project monitors, a second set of stratifying criteria was developed to guide the final site selection. These criteria were the following:

> Diversity of Arson Prosecution Structures: because of the perceived importance of specialized arson prosecution, this was determined to be a key criterion. Sites were chosen to represent the following points on a continuum from totally specialized to totally unspecialized prosecution: no specialized arson prosecution with horizontal prosecution structure (Cleveland); no specialized arson prosecution with predominantly vertical prosecution structure (Denver); institutionalized arson specialization at the screening stage with specialized vertical prosecution of most cases (San Diego); and institutionalized arson

specialization with vertical prosecution of all arson cases (the Bronx). Specialization is defined as having one or more formally designated arson prosecutors; under this rubric come systems in which the arson prosecutor screens all arson cases, retains the more complex among them and passes the rest on to the regular trial attorneys (San Diego), and systems in which all arson cases are screened and prosecuted within a special unit (the Bronx);

Diversity of Arson Investigation Structures: sites chosen represent the three most common of the typology of arson investigative structures (see Section 1.1.2 above): "divided responsibility" between fire and police departments--by far the most common approach (Cleveland and the Bronx);[1] "police-fire team" approach (City of San Diego); "all-fire" approach (Denver); "all-police" approach (San Diego County Sheriff's Arson and Explosion Unit--areas outside City of San Diego).[2]

Two other potential site selection criteria were considered but ultimately discarded. We had originally believed that differences in the language of arson statutes would be an important consideration. The statutes in some states appeared to make it difficult to reach fraud arsonists who hired torches and/or burned their own property, while laws in other states included explicit provisions covering such cases. However, initial contacts with prosecutors suggested that this might not be as important a factor for explaining adjudication outcomes as originally anticipated. Prosecutors in states with arson laws that do not explicitly cover hiring a torch or causing a fire to be set reported that conspiracy or complicity laws are used to prosecute such actions. It is important to note, as well, that most states have recently revised their arson laws at least to cover burning one's own as well as someone else's property. We are not aware of any states that continue to use the restrictive common law definition of arson (the malicious burning of the dwelling of another).

Presence of mandatory sentencing provisions or other limitations on sentencing discretion was also considered as a possible stratifying feature. All of the sites ultimately selected operate under some such requirement, but selection of sites to include those operating both with and without such

[1] Since the period of the study, the Bronx has converted to a police-fire team approach.

[2] The "all-police" approach is extremely unusual. We are aware of only one major American city in which it used--Chicago.

sentencing provisions was ultimately considered unnecessary and perhaps unwise. Most observers believe that mandatory sentencing laws do not markedly reduce the amount of prosecutorial discretion in plea negotiations--rather, they simply move the process to an earlier point. In essence, negotiations concern the charges to be filed or pled to rather than the sentence to be imposed.

Figure 1.1 shows how the four study sites are distributed according to prosecution and investigation structures. Sites were defined to coincide with the jurisdiction of the prosecutor--the county. In two sites, the Bronx and Denver, city and county are coterminous; thus the prosecutor's office and investigative unit cover exactly the same geographical area. In the other two sites, Cleveland and San Diego, the county includes other jurisdictions besides the major cities under study. Indeed, San Diego County includes large rural areas as well as several other smaller cities. Cuyahoga County comprises the city of Cleveland and a number of other smaller municipalities and suburban communities.[1]

1.2.3 Case Sample Selection

This is a study of arson prosecution; but because of the importance of investigation and prosecutorial screening to the overall prosecution process, the study would present an incomplete and highly misleading picture if it focused only on cases accepted for prosecution. Indeed, as documented in Chapter 3, when measured on the basis of cases accepted for prosecution, arson conviction rates are extremely high--as high as the rates for most other felonies. On the other hand, if measured on the basis of numbers of fires determined to be arson, conviction rates are extremely low--lower than comparable rates for many other felonies. We wished to study cases entering the process (fires determined to be arson), so as to be able to document arson caseflow from start to finish. We also wished to include enough cases to permit full examination of the process of prosecutorial screening of arson cases and analysis of reasons for case declinations. Finally, we fulfilled the basic mandate of the study by including a large number of cases accepted

[1] For convenience, we use "Cleveland" and "San Diego" throughout the report to refer to Cuyahoga County and San Diego County.

Figure 1.1

Study Sites by Type of Prosecution and Investigation Structures[a]

ARSON INVESTIGATION STRUCTURE	ARSON PROSECUTION STRUCTURE		
	Non-specialized/ Horizontal	Non-specialized/ Vertical	Specialized/ Vertical
Divided responsibility--Police and Fire Departments	Cleveland		Bronx
Police-Fire Team Approach			City of San Diego
All-Fire Approach		Denver	
All-Police Approach			San Diego Co. Sheriff's Department

[a]This figure depicts the organizational structures which were operating at the time that the cases in our study were being processed. Some of the sites have recently undergone changes in their operations.

for prosecution, so as to permit identification and analysis of the factors associated with various case outcomes.

Thus, a three-part case sampling design was developed. In each site the following three samples were selected, in this order:

1. prosecution sample: 100 recently disposed arson cases;[1]
2. investigation sample: a simple random sample of 100 fires investigated and determined to be arson--drawn from the records of the investigative unit;[2]
3. supplemental sample of declined cases: all declined arson cases from the investigation sample period.[3]

---

[1]Our definition of "disposed" was that at least one defendant in the case had reached final disposition--excluding sentencing and appeal. In the Bronx and Cleveland, available records permitted selecting the last 100 cases disposed essentially to the date our sample was chosen--that is, almost literally the most recent 100 arson case dispositions. In San Diego, computerized records allowed us to select the last 100 dispositions from among cases filed in court during 1980 and 1981. Finally, in Denver, we were forced to select cases based on filing date rather than disposition date. We selected cases filed on or before June 30, 1981; to obtain 100 cases, we had to go back to cases filed beginning January 1, 1980.

"Arson case" was defined as any case with an "arson" charge (or arson-related charge of conspiracy, insurance fraud, possession/use of incendiary device, etc.) included in any formal charging document (e.g., complaint, information, or indictment). In the Bronx, Denver, and San Diego, the prosecutor's office has jurisdiction over felony and misdemeanor violations of state laws--thus, some misdemeanor arson cases are included from these sites. In Ohio, by contrast, arson and related charges always constitute felonies; thus, our Cleveland sample includes only felony cases.

Prosecution samples from Cuyahoga County and San Diego County include small numbers of cases from jurisdictions outside the cities of Cleveland and San Diego. Appendix A provides further information on sampling procedures.

[2]Although Cuyahoga County and San Diego County are both served by single prosecutors' offices, they include other jurisdictions besides the cities of Cleveland and San Diego that are covered by non-city arson investigation units. In San Diego County, the vast majority of arson cases are investigated by the Metro Arson Strike Team (which covers the city of San Diego) and the County Sheriff's Arson and Explosion Unit. Thus, we decided to select our investigation sample in both of these units, in proportion to their caseloads. In Cuyahoga County, arson investigation activity outside Cleveland is so fragmented that we decided to limit our investigation sample to the Fire Investigation Unit and Police Arson Unit covering the city of Cleveland.

[3]The supplemental sample in San Diego County includes some cases from units other than the MAST unit and the Sheriff's Arson and Explosion Unit.

The design essentially meant that prosecuted and declined cases were deliberately oversampled, with the investigation sample providing a means to estimate "true" proportions in a caseflow analysis. Table 1.1 depicts the samples according to investigation or prosecution outcome. As shown in the table, the full data set comprises 884 discrete cases, since there is an overlap of 21 cases between the investigation and prosecution samples.

1.2.4 Data Collection

Data were collected for the study during three periods of on-site activity. Once the sites were selected and their cooperation had been obtained, Abt Associates senior staff carried out a round of preliminary site visits. These visits were used to gather detailed information on the context, process, and perceived characteristics of arson investigation and prosecution. During these visits, we also gathered available arson incidence and caseflow statistics and examined investigative, prosecutorial, and court record-keeping systems to guide our case sampling procedures.

In the second period of on-site activity, each case universe was defined and the samples were selected. Case data were then coded on structured data collection instruments. Two instruments had been developed, one to collect case- and fire-level information (including evidence data for cases not resulting in prosecution), and another to collect defendant-level information (including evidence data) in cases accepted for prosecution. (The instruments are included in Appendix A.) The cases were coded from information in the files of the investigation unit and/or prosecutor's office. Where necessary and feasible, file information was supplemented by interviews with cognizant staff. However, by and large, we were limited in data collection to the information available in the file, even though this information was sometimes cryptic and perhaps incomplete. Thus, it is important to offer a general qualification of our findings in this regard. They are based on careful collection and coding of file information only. The analysis must be understood to concern the presence or absence of documentation concerning certain events (e.g. prosecutor involvement in the investigation, laboratory analysis) or types of evidence; we cannot be certain that absence of documentation means that the event did not occur or that the evidence type was not present in the case.

Table 1.1

Arson Case Samples, by Investigation/Prosecution Outcome

Sample	Adult Prosecution	Declined: Adult Declination	Declined: Declined--Referred to Juvenile Prosecution[a]	Not Presented for Prosecution: Not Presented--Cases With No Suspects	Not Presented for Prosecution: Not Presented--Cases With Adult Suspects	Not Presented for Prosecution: Not Presented--Juvenile Counseling[a]	Total
Prosecution	400	--	--	--	--	--	400
Investigation	29	8	6	285	66	6	400
Supplemental-Declination	--	105	--	--	--	--	105
Total	429	113	6	285	66	6	905
Overlap	21[b]	--	--	--	--	--	21
Discrete Cases	408[c]	113[d]	6	285	66	6	884
Discrete Defendants	471	--	--	--	--	--	--

[a] Appendix B describes juvenile case processing in the four study sites.

[b] The 21 overlap cases were prosecuted cases chosen in the random sample of investigations which were already in the previously identified prosecution sample. However, eight other prosecuted cases selected in the random sample of investigations had not been selected in the prosecution sample because of differences in the sampling periods.

[c] Hereafter, this group of 408 discrete adult prosecutions is referred to as the "augmented prosecution sample," or "prosecuted cases."

[d] Hereafter, this group of 113 discrete adult declinations is referred to as the "augmented declination sample" or "rejected cases."

The coding was carried out by Abt Associates' senior staff and local data collection assistants. These assistants, identified with the help of on-site staff and contacts in local universities, included graduate students, undergraduate students, a prosecutor's office intern, a recent law school graduate, and an attorney with arson investigation experience.

The coded instruments were returned to Abt Associates headquarters where they were reviewed for accuracy, internal consistency, and completeness. Cases with missing, incorrect, or unclear entries were completed and/or corrected by the on-site data collection assistants or through follow-up telephone interviews with cognizant prosecutors and investigators. Once the instruments had passed the quality-control review, they were turned over to Abt Associates' Survey Research Group for post-coding of the open-ended questions and entry into the computer. Once key-entered and verified, the data base was ready for analysis.

One of the objectives of the case record data analysis (briefly described in Section 1.2.5, below) was to identify "interesting" cases for follow-up interviews during the third period of on-site activities. We were interested in cases with unusual or particularly complex--as well as "typical"--evidentiary patterns or outcomes that were surprising based on the file information. (We also manually flagged "interesting" cases for follow-up during the case records data collection.) The follow-up interviews were conducted with prosecutors and investigators during final site visits by two Abt Associates senior staff members. The visits were also used to clarify our understanding of arson investigation and prosecution procedures and to give investigators and prosecutors an opportunity to react to the hypotheses developed during the case record data analysis. Information from these discussions suggested further analyses of the data and informed the refinement of hypotheses and their development into the detailed findings and recommendations presented in this report.

1.2.5 Data Analysis

The analysis of the case records data was guided by a detailed analysis plan developed at the end of the case records data collection phase. As specified in the plan and as further refined and elaborated in practice, the analysis proceeded in the following steps:

- definition of a final typology of arson cases according to motive;
- definition of summary case outcome variables;
- caseflow analysis of the investigation and prosecution samples, by case type (motive), outcome (intermediate and final), and site;
- definition of case characteristics variables to reflect various attributes of the fire(s), the investigation and the parties involved;
- definition of summary evidence variables to reflect the presence or absence of a wide variety of evidence types;
- examination of the data for noticeable case clusters according to the evidence and case characteristics variables;
- multivariate analyses (multiple regression analysis) designed to probe the relationships between case outcomes and evidence variables/case characteristics. The multivariate analyses are described in detail in Appendix A.
- identification of "interesting cases" for follow-up interviews, using computer runs to list cases with particular characteristics or combinations of characteristics of interest.

1.3 Guide to the Report

In the remaining chapters, we present the detailed findings of the study. Chapter 2 summarizes the structure and process of arson investigation and prosecution in the four study sites. Chapter 3 describes the arson cases sampled in the four sites and presents an overview of the investigation and prosecution caseflow data. Chapter 4 discusses the investigative process and how investigators select cases for follow-up attention and ultimate presentation to the prosecutor. Chapter 5 analyzes prosecutorial screening of arson cases and Chapter 6 analyzes the outcomes of the cases accepted for prosecution. (Table 1.2 shows how the case samples described above were grouped for analytic purposes and the chapters in which these analyses are presented.) Finally, Chapter 7 summarizes the policy recommendations and further research needs suggested by the findings of the study. Appendix A provides additional detail on the study methodology and Appendix B discusses juvenile arson and juvenile case processing in the four study sites.

Table 1.2

Analytic Uses of Case Samples and Groupings

Chapter	Analysis	Case Sample/Grouping	n
3	Case Characteristics	Investigation Sample; Augmented Prosecution Sample	400 408
	Investigation Caseflow	Investigation Sample	400
	Prosecution Caseflow	Augmented Prosecution Sample	408
4	Identification of Suspects	Investigation Sample	400
	Decision to Present to Prosecutor	Investigation Sample:	
		• Adult Cases Presented	37[a]
		• Cases With Adult Suspects but not presented	66
5	Prosecutorial Screening	Augmented Prosecution Sample; Augmented Declination Sample	408 113
6	Outcomes of Prosecuted Cases	Augmented Prosecution Sample	408
	Characteristics of Cases Going to Trial	Augmented Prosecution Sample: • Defendants going to trial	65
	Outcomes of Cases Going to Trial	Augmented Prosecution Sample: • Defendants going to trial, except those whose cases ended in findings of not guilty by reason of insanity	58

[a]This is the total of adult cases accepted (29) and adult cases rejected (8), as shown in Table 1.1.

2.0 A COMPARATIVE OVERVIEW OF STUDY SITES

In this chapter, we identify several contextual and organizational factors that shape arson investigation and prosecution, describing each factor as it varies among the study sites. This discussion provides an overview of the arson problem faced by each jurisdiction, the statutory framework within which each site operates, and the organization and procedures involved in both the investigative and proscutorial functions.

The arson caseload of each investigative unit (and ultimately each prosecutor's office) is determined in part by the nature of the arson problem and in part by the applicable laws. For example, a jurisdiction may experience a number of intentionally set fires in forest land, yet these may not be treated as arsons because of the statutory provisions in force at the time. Similarly, caseloads are shaped by internal policies that determine which fires merit investigation and which do not, sometimes using criteria such as severity of damage or type of property involved. The procedures adopted for arson investigation and prosecution may be influenced by the organizational structure of the agencies involved and the division of labor both within and between agencies.

It is, therefore, unlikely that arson case processing in one site will be identical to that in another jurisdiction given the influence of factors such as those mentioned above. Indeed, the design of this study purposefully included variation in the allocation of investigative responsibility and the structure of the prosecutor's office (as described in Chapter 1). The overview provided in this chapter is designed to introduce information on general aspects of each site's organizations and operations and to alert the reader to site-specific characteristics that may help to explain the study's findings. In succeeding chapters, each step in the flow of arson cases is examined in detail, citing specific, relevant organizational and operational factors.

2.1 Nature and Extent of the Arson Problem

Statistical estimates on the incidence of arson suffer from a variety of serious definitional and categorization problems and, as a result, are often contradictory or simply ill-suited to comparative analyses. Data are available from both the Federal Emergency Management Agency's National Fire Incident Reporting System (NFIRS) and the FBI's Uniform Crime Reporting (UCR)

Program, but these agencies use different methodologies and report different information. NFIRS data and data from the annual survey of fire experience conducted by the National Fire Protection Association are obtained from fire departments, the former from periodic reporting and the latter from an annual survey. The statistics generated by the FBI reflect crimes (arson and attempted arson) "known to law enforcement" authorities Thus, fire department data may measure incendiary fires, some of which may not constitute a crime. Yet data derived from law enforcement files do not include fires of "suspicious" or "unknown" origin.

The FBI's UCR program has only recently included arson as a Part I offense, and many problems in definition and data collection have yet to be resolved. UCR reporting has always been the province of law enforcement authorities, and this remains true for arson. Unfortunately, however, the police department or other law enforcement unit that makes UCR reports in a jurisdiction is normally not responsible for fire cause determination. This is typically a responsibility of the fire department. Thus, accurate UCR reporting of arson requires not only detection of the crime but also collection of incidence data by the fire department and their transmission to the UCR reporting authority for retransmission to the FBI. Besides the greater chance of error introduced by intermediary steps, this system also commonly suffers from traditional suspicions and "turf battles" between fire and police departments. Additional difficulties encountered in the UCR reporting program mirror those of most arson data collection efforts. Some jurisdictions may collect data only on structural fires, whereas others may include vehicles, personal property, rubbish and grass lands as targets of arson. Moreover, what is classified as "incendiary" in one jurisdiction may be considered only "suspicious" elsewhere.

The reliability of existing arson data is even more questionable when the issue of undetected arsons is considered. The statistics that are compiled reflect only the known arsons. Although in recent years many jurisdictions have intensified training in arson detection and investigation, it is unlikely that all arsons are being identified, particularly in rural areas served by volunteer fire departments.

Thus, existing national data on arson may serve as an <u>indicator</u> of the scope of the problem. However, using such data, or even data from individual jurisdictions, for comparative purposes (over time or across sites) is very risky and certainly does not permit definitive interpretation.

Despite these enormous problems, arson incidence data are needed to provide a context for examining investigative efforts and successes. Without some general assessment of the extent of the arson problem, we are unable to comprehend the difficulty of the investigative task. Therefore, Table 2.1 presents selected incidence data for the study sites. It is important to emphasize that these data have different meanings in each site, and one cannot make workload comparisons between investigative units based on these statistics.

For simplicity, Table 2.1 only includes data from 1980 and 1981. Those data and any available from prior years tend to indicate stability in the incidence of arson, with some exceptions. In the Bronx, the last few years have seen a decline in the number of fires in structures from the days (earlier in the 1970s) when the area was literally burning to the ground, but the decline has leveled off in recent years. By contrast, Cleveland experienced an increase in the number of incendiary fires in the late 1970s, but that trend has also leveled off. For the most part, investigators in all sites feel that the arson problem in their area is not changing drastically in scope or character at this time.

All four sites experience arson resulting from all major motive types. That is, a certain number of fires are attributable to spite or revenge, some are the result of vandalism, some stem from a deliberate decision to burn property for profit, and others occur as a result of mental illness, a desire to be recognized, or compulsive firesetting behavior. Although the Bronx suffered through years of arsons committed by property owners seeking profit, this type of activity seems to have peaked and begun to decline. Cleveland experienced a more recent wave of arsons of that type, but there is reason to believe that these fires have also declined in the last few years. Investigators in both Denver and San Diego acknowledge that arson-for-profit is a relatively new concern in their jurisdictions and feel that there is more of it occurring than is generally recognized. However, they also feel that these arsons are largely a one-time, non-organized activity (whether by individual business proprietors or by homeowners), in contrast to the Bronx experience where a group of landlords were involved in conspiracies to burn many buildings.

Table 2.1

Fire and Arson Incidence in Study Sites

	Bronx		Denver		San Diego[a]		Cleveland	
	1980	1981	1980	1981	1980	1981	1980	1981
Number of Fires	N/A	N/A	7,678	6,957	8,306	8,406	8,610	8,546
Number of Incendiary Fires	N/A	N/A	3,365	N/A	4,021	4,168	4,313	4,387
Number of Fire Investigations	N/A	N/A	1,384	1,324	639	695	1,442	1,475
Number of Incendiary Fires in Structures	2,378	2,411	410	N/A	N/A	N/A	1,190	1,058

[a]Data in this column are only for the City of San Diego.

NOTE: These items are limited by site-specific definitions which are often related to the operative statutes; see discussion in text.

Despite the attention paid to arson-for-profit, it is generally believed to be less common than arson committed for spite or revenge. Fires set by juvenile vandals are also a large component of the arson problem, while fires set as a result of mental problems are considered to be a far less serious problem than the other types in all the study sites.

Investigators are willing to generalize as to the frequency of different motive types, but it is important to note that in many cases there is no way to determine conclusively the motive behind the fire. As this is considered an important factor in targetting investigative resources and identifying and linking a suspect to a specific fire, the difficulty of determining the type of arson problem facing a jurisdiction as a whole (as well as making such a judgment in an individual case) takes on greater significance.

2.2 The Legal Environment[1]

The crime of arson, as set forth in state penal statutes, has undergone considerable redefinition over time. At common law, arson was very narrowly defined, encompassing only "the malicious burning of the house or [outbuilding] of another."[2] This definition was interpreted to mean dwellings. Over the past few decades, however, most states have significantly revised their laws in this area. These initiatives have been guided in part by model legislation developed through the efforts of the legal profession, fire protection agencies, and the insurance industry.[3]

---

[1]Throughout this report we use the term "arson" generically to indicate acts involving the use (or attempted use) of fire as a means of destruction. We have not focused only on those statutes labelled arson but have included the laws prohibiting reckless burning (unless contained only in an ordinance). For example, in California, only §451 of the Penal Code is titled "Arson," yet we have included §452 ("Unlawfully causing a fire") and related statutory sections within our purview. We have not included cases initially classified as involving only "Malicious mischief" or "Reckless endangerment," since these crimes are not fire-specific. In New York, where reckless endangerment is often charged in addition to arson (as will be discussed later in this report), a case was not included in our study unless it was initially investigated or prosecuted under the arson statute.

[2]Black's Law Dictionary, (Revised 5th ed., St. Paul, MN: West Publishing Co., 1979).

[3]The most important of these models are: the Model Arson Law, originally promulgated in 1931 by the National Fire Protection Association and revised in 1948 by the National Board of Fire Underwriters; the Model Penal Code of 1960, developed by the American Law Institute and containing a provision governing arson; and Model Arson Penal Law, developed in 1981 through the joint efforts of the Alliance of American Insurers, the American Insurance Association, the National Association of Independent Insurers, and the Property Loss Research Bureau.

Despite the fact that these model acts have influenced legislation in every state, significant variations still exist among state arson statutes. These variations arise both in the penalty structure and the definition of the offense--e.g. the type of property burned, the type of intent required, and the need to establish existence of risk to persons or property. Figure 2.1 provides an overview of the key provisions of the arson statutes in the four states studied. (The statutory provisions are laid out in more detail in Figure 2.2, at the end of this section, which also includes information on offense classifications and penalties.) Below, we discuss the most significant aspects of these laws and review other elements in the legal environment affecting arson prosecution.[1]

The instrumentality by which property is threatened or damaged is one area in which arson statutes have undergone revisions in recent years. As reported in 1979 by the Federal Emergency Management Agency,

> explosions or bombings...are not specifically included in the arson sections of most state penal codes...[The provision of the Model Arson Penal Law governing explosions or bombings] was added specifically to define explosions or bombings as a method of incendiary fire and thereby facilitate prosecution.[2]

Three of the four study sites allow anyone who causes or risks damage by fire or by explosion to be prosecuted for arson where there is a threat of personal injury. Only California does not include specific language on explosions within its arson statute. Where there is a threat to life, New York distinguishes between instances in which an incendiary device or explosive is used and those in which the threat is caused by setting a fire. (The first instance is designated a Class A-1 felony and the latter a Class B felony.) However, New York law draws no distinction between the use of fire and creation of an explosion where the only threat is to property.

---

[1]This discussion is based on information obtained through examination of state statutes and from interviews with prosecutors. Resources did not permit any analysis of subsequent interpretations of these statutes contained in case law.

[2]U.S. Fire Administration, Federal Emergency Management Agency, Report to the Congress, Arson: The Federal Role in Arson Prevention and Control (Washington, DC: August, 1979), p. 190.

Figure 2.1

Key Aspects of Arson Statutes in the Study Sites

	California	Colorado	New York	Ohio
Includes damage by both fire and explosion		X	X	X
Targets Covered:				
Structures	X	X	X	X
Vehicles	X	X	X	X
Personal property	X	X		X
Wildlands and forests	X			
Prohibition against burning one's own property[a]	X	X	X	X
Requirement of actual injury rather than risk	X[b]			
Classification on potential or actual monetary loss		X		X

[a] This prohibition is not absolute. The specific conditions in each state under which a person may be prosecuted for burning his or her own property are discussed in the text.

[b] Required only for the most serious degree of arson. Not required for lesser degrees.

One area of frequent criticism directed at arson statutes in the past has addressed limitations on what may be the target of arson. Dwellings and associated outbuildings have traditionally been included within the scope of arson. Over time, other buildings, structures and vehicles (whether used on land, water or air) have been incorporated into arson laws. In the four study sites, the arson laws are quite broad and cover all of the above types of property. New York, however, limits its arson statute to buildings and vehicles, while coverage is also extended to items of personal property in the other three states. Thus, in these states, an arson prosecution may be brought against someone who sets fire to items such as clothing, even if the fire occurs far from any building or vehicle. California's arson statute goes one step further and includes forest land (not surprising given the immense problem posed by such fires throughout that state).

In addition to variations in the nature of the property which may be the target of arson, statutes sometimes contain potential loopholes in the area of the ownership of the property. Again, this characteristic may be traced back to the common law definition of arson, in which only property of another was included. Thus, for many years, one could not be prosecuted for burning property in which no other party held an ownership interest. The common law concept of permitting one to set fire to one's own property is retained in New York law, unless the fire is in a structure or vehicle in which an innocent party is present. If that condition is not met and the defendant's conduct is labelled reckless, the defendant may claim, as an affirmative defense, to be the only individual with a possessory or proprietary interest in the property. If the defendant is charged with intentionally damaging the property (rather than recklessly doing so) and no innocent party is present in the property, an affirmative defense exists if the defendant is the sole owner or all owners gave consent to the firesetting act, the purpose of the fire was lawful, and there was no reason to believe that other persons or property would be endangered.

Statutes of the other states in this study also include limitations in their definition of arson based on the ownership of the property. In Colorado, setting fire to one's own property is considered arson only if there is an intent to defraud or if the action creates a risk to another person or to a building or occupied property of another. In the latter situation,

where the threat of injury is to property and not persons, Colorado law classifies the crime only as a misdemeanor. The element of external risk is also incorporated into Ohio law. No distinction is made regarding the ownership of the burned property if the fire creates a substantial risk of harm to a person or to an occupied structure. However, where such a risk does not exist, there must be an intent to defraud for the burning of one's own property to constitute arson. In California, no one can be prosecuted for burning their own personal property, but where real property is involved, ownership is irrelevant. Although there remain circumstances in all study sites in which a person who burns his or her own property may not be charged with arson, prosecutors interviewed in the course of this study stated that existing statutes were sufficient to reach all cases that should, in their opinion, be prosecuted.

A concern raised in the past regarding limitations of arson statutes involves barriers to the prosecution of someone who procures (pays for) the burning of property. Although not all of our sites have arson statutes that specifically encompass such behavior, respondents in the sites without such language noted the availability of conspiracy and complicity laws under which charges may be brought.

As noted earlier, fires that raise the possibility of harm to other persons or property are generally classified separately from those in which no such risk is posed. Typically, fires involving this type of risk are considered a more serious degree of crime with consequent harsher penalties. Of the four states involved in the study, only California makes this classification dependent on whether the fire actually "causes great bodily injury" rather than on the potential of harm. Ohio's law is very broad in this regard, since it treats with equal severity fires occurring in structures where persons are actually present and those where persons are <u>likely</u> to be present. (The statute covers places used for permanent or temporary dwelling habitations or overnight accommodation, regardless of whether any person was present at the time of the fire.)

The hierarchy of arson statutes is also influenced in some states by another measure of harm--monetary loss. Both Colorado and Ohio classify certain arsons as less serious depending on cost factors. In some circumstances, the actual extent of damage is used as the criterion for this classification. In other instances, however, the value of the property put at risk is used; this allows consideration of the potential harm posed by the arsonist's actions even if he or she failed to cause much actual damage. (As discussed in subsequent chapters, these issues may influence decisions whether to allocate investigative resources to cases and whether to accept cases for prosecution.)

Arson is a crime requiring proof of the defendant's intent in setting the fire. Some laws require only that the state prove that the defendant deliberately or knowingly set a fire which resulted in damage. Other statutory provisions may allow prosecution where the defendant acted recklessly. As noted earlier, the intent to defraud is an element in some arson statutes. In the study sites, only California law has a more subjective mental element, requiring for certain types of arson that the state prove that the defendant acted "willfully and maliciously." Although this might seem to be a more difficult standard of proof, San Diego prosecutors interviewed in the course of this study did not feel that the statutory language was an obstacle to successful arson prosecution.

The discussion above reviewed key elements of the arson statutes in use in the four study sites. Since these statutes influence both investigative and prosecutorial caseloads, differences among sites discussed in later chapters may be explained on occasion by reference to the applicable laws. Therefore, to assist the reader in recalling specific details of these laws, Figure 2.2 provides a detailed summary of the provisions, offense classification, and potential penalties specified in each statute.

2.3 <u>The Arson Investigation Process</u>

As noted in Chapter 1, the three most common organizational approaches to arson investigation are represented among the study sites: division of responsibility between fire and police units, teams of fire and police personnel, and allocation of responsibility solely to the fire department. Although none of the sites is primarily classified as having an all-police investigative approach, a version of this strategy is in effect in parts of San Diego County, where investigations are conducted by the Sheriff's Department. A brief description of each site's investigative structure is provided below, followed by a discussion of the actual policies and procedures that

Figure 2.2

Summary of Arson Statutes in Study Sites[a]

CALIFORNIA[b]

Offense[c]	Classification	Penalty[d]
Maliciously burning structure, forest or property which causes great bodily injury	Felony	5, 7, or 9 years
Maliciously burning structure, forest or property which causes inhabited structure or property to burn	Felony	3, 5, or 7 years
Maliciously or recklessly burning structure, forest or property during a state of insurrection or emergency	Felony	3, 5, or 7 years
Maliciously burning structure or forest	Felony	2, 4, or 6 years
Recklessly burning structure, forest or property which causes great bodily injury	Felony or Misdemeanor	2, 4, or 6 years 1 year
Recklessly burning structure, forest or property which causes inhabited structure or property to burn	Felony or Misdemeanor	2, 3, or 4 years 1 year
Maliciously burning property[e]	Felony	16 months, 2, or 3 years
Recklessly burning structure or forest	Felony or Misdemeanor	16 months, 2 years, or 3 years
Attempted arson	Felony	16 months, 2 years, or 3 years
Possessing flammable or explosive material or device with intent to maliciously burn structure, forest or property	Felony or Misdemeanor	1 year 1 year

[a] The provisions summarized in this figure are listed in descending order of seriousness as defined by the jurisdiction's classification (for example, first degree felony, second degree felony) or, in the case of Calfornia--which does not have such a system--by severity of possible penalty.

[b] California Penal Code §451-455.

[c] As defined by California law, "structure" does not include vehicles, ships or other moveable objects. "Inhabited" is defined as in current use as a dwelling, whether occupied or not.

[d] In addition to penalties of imprisonment, California law provides for a fine of $50,000 for a felony conviction or, if the crime was committed for pecuniary gain, a fine of twice the anticipated or actual gross gain.

[e] Does not include burning one's own personal property unless there is an intent to defraud or do injury to another person or to another person's structure, forest land, or property.

Figure 2.2 (continued)

CALIFORNIA (continued)

Offense	Classification	Penalty
Possessing, manufacturing or disposing of firebomb	Felony	Unspecified
Unlawfully causing a fire of property[f]	Misdemeanor	Unspecified

COLORADO[g]

Offense[h]	Classification	Penalty
Knowingly burning or damaging by explosive device any building or occupied structure of another without his consent	First degree arson/ Class 3 felony	4-8 years
Knowingly burning or damaging by explosive device any property (except a building or occupied structure) of another without his consent	Second degree arson/ Class 4 felony if damage is $100 or more; Class 2 misdemeanor if damage is less than $100	2-4 years 3 mos./$250 fine 12 mos./$1000 fine
Intentionally damaging by fire or explosives any property with intent to defraud	Third degree arson/ Class 4 felony	2-4 years
Knowingly or recklessly starting or maintaining a fire or causing an explosion on one's own property or that of another and thereby:	Fourth degree arson/	
-placing another in danger of death or serious bodily injury or	Class 4 felony	2-4 years
-placing building or occupied property of another in danger or damage	Class 2 misdemeanor if value is $100 or more; Class 3 misdemeanor if value is less than $100	3 mos./$250 fine- 12 mos./$1000 fine- $50 fine- 6 mos./$750 fine

[f] Does not include burning one's personal property unless there is injury to another person or to another person's structure, forest land, or property.

[g] Colorado Revised Statutes §18-4-101 to 18-4-105.

[h] Colorado law defines "buildings" as structures to contain or shelter persons, animals, or property and includes vehicles or other movable structures which are adapted to provide overnight accommodation or a place to conduct business regardless of whether any person or animal is actually present. "Occupied structure" may be a building or other place which is actually occupied and known by the defendant to be occupied.

Figure 2.2 (continued)

NEW YORK[i]

Offense[j]	Classification	Penalty	
		Minimum	Maximum
Intentionally damaging a building or motor vehicle by explosion or fire through use of an incendiary device or explosive and non-participant in the crime is inside and the defendant knows that fact or circumstances are such that the presence of such a person is a reasonable possibility.	First degree arson/ Class A-1 felony	15 years	Life
Intentionally damaging a building or motor vehicle by starting a fire and a non-participant in the crime is inside and the defendant knows that fact or the circumstances are such that the presence of such a person is a reasonable possibility.	Second degree arson/ Class B felony	2-6 years	25 years
Intentionally damaging a building or motor vehicle by fire or explosion[k]	Third degree arson/ Class C felony	1-3 years	15 years
Recklessly damaging a building or motor vehicle by intentionally starting a fire or causing an explosion.[l]	Fourth degree arson/ Class E felony	Conditional discharge	4 years

[i] New York Penal Law, §150.

[j] New York law, in addition to its ordinary definition, specifies that a "building" includes any structure, vehicle or watercraft used for overnight lodging of persons or in which persons carry on business.

[k] Under New York law, it is an affirmative defense to this crime if: only the defendant had a possessory or proprietary interest in the property or any others with such interest consented to the defendant's actions; and the defendant's sole interest was to destroy or damage the property for a lawful and proper purpose; and the defendant had no reasonable ground to believe that his actions might endanger any person or other building or vehicle.

[l] New York law provides that an affirmative defense to this charge exists if only the defendant had a possessory or proprietary interest in the property.

Figure 2.2 (continued)

OHIO[m]

Offense[n]	Classification	Penalty
Knowingly, by fire or explosion: 1) create a substantial risk of serious physical harm to a person; 2) cause harm to any occupied structure; 3) create, through an agreement for hire, a substantial risk of (1) or (2) above.	Aggravated arson/ First degree felony	4-25 yrs./$10,000 fine
Knowingly, by fire or explosion: - cause, or create a substantial risk of harm to property of another without his consent or to any property with purpose to defraud, through an agreement for hire.	Arson/ Second degree felony	2-15 yrs./$7500 fine
	Third degree felong if value or harm is $150 or more;	1-10 yrs./$5000 fine
- cause, or create a substantial risk of harm to property of another without his consent;	First degree midsemeanor if value or harm is less than $150	6 mos./$1000 fine
- cause, or create a substantial risk of harm to own property or that of another with purpose to defraud	Third degree felony	2-15 yrs./$7500 fine
- cause, or create a substantial risk of harm to public structures	Third degree felony	2-15 yrs./$7500 fine

[m] Ohio Revised Code Annotated §2909.01-2909.03.

[n] Under Ohio law, "occupied structure" is defined as a building, vehicle, or shelter which is: a) maintained as a permanent or temporary dwelling, even if temporarily unoccupied, whether any person is actually present or not; or b) occupied at the time as a permanent or temporary habitation, whether any person is actually present or not; or special adapted at the time for overnight accommodation, whether any person is actually present or not; or a place where at the time any person is present or likely to be present.

have been implemented to guide the entire investigation process. These materials provide an important context for the caseflow discussion in Chapter 3 and the analysis of investigation in Chapter 4.

2.3.1 Organization and Structure

Bronx County, New York

In Bronx County, both the fire marshals and the police department have the legal authority to carry out the entire arson investigation from cause and origin determination to arrest. In the past, there have been a number of disputes over "turf" as investigative efforts overlapped in individual cases. A system of divided responsibility was instituted throughout the Bronx in 1980. The provisions of this arrangement allocated to the fire marshals the duties of conducting the examination of the fire scene and determining the cause and origin of the fire. The tasks of interviewing witnesses and conducting the criminal investigation to identify and apprehend the suspect were delegated to the Arson and Explosion Unit of the police department. (If a case is primarily a homicide case and the arson is secondary, the Homicide Unit handles the case.) This division of responsibility is not rigid, however, and a fire marshal still has the authority to identify and arrest a suspect at the scene, although this rarely occurs.

Fire marshals responsible for investigations in the Bronx at the time of this research were assigned to a division that also handled fires in Queens and northern Manhattan.[1] This division consisted of 53 marshals (including supervisory staff) for the entire geographic area. The fire marshals operated in teams of two, with a minimum of six on duty at any given time.

The position of fire marshal is the only investigative position in New York City requiring a promotional civil service examination. All candidates must have at least three years' experience as a firefighter. Statistics maintained by the City indicate that approximately 40 percent of the fire marshals have, at some time, also served as police officers. Training for newly

[1] In mid-1982, arson investigation in the Bronx became more of a team effort, with fire marshals assigned to work out of the precinct station housing the police arson unit. As this change occurred after the investigation and prosecution of the cases in our study were completed, the discussion focuses on the system in existence at the time the cases were handled.

appointed fire marshals consists of an intensive eight-week course in fire investigation.

The police Arson and Explosion Unit is composed of three sergeants, 21 detectives, and a supervising lieutenant. The jurisdiction of this unit is limited to the Bronx. Twenty-four hour coverage is provided by three shifts of seven detectives each. Detectives assigned to the unit complete a seven-day arson investigation course.

Cuyahoga County (Cleveland), Ohio

The City of Cleveland also divides arson investigation duties between fire and police units, in a system that has been in place for over five years.[1] The precise division of responsibility between the two units is not clear in practice. In general, the Fire Investigation Unit (FIU) is responsible for the "original investigation," including scene examination, collection of physical evidence and its presentation to the laboratory for analysis, initial interviews with firefighters and witnesses, and final determination of the fire's cause and origin. The investigators of the FIU also have police powers so they can make arrests at the scene, if necessary.

In theory, however, once the original investigation is complete and the cause and origin of the fire has been established, FIU turns the case over to the Police Arson Unit (PAU) for follow-up investigation. (If a homicide is involved, the Police Homicide Unit takes the lead on the investigation.) In practice, both the FIU and PAU may be involved in on-scene work and follow-up investigations. If both units are at the scene, PAU detectives will conduct the interviews but are unlikely to become involved in the physical examination.

The Fire Investigation Unit was once a part of the Fire Prevention Bureau, whose major responsibility is fire safety inspections. About four years ago, however, FIU was established as a separate unit directly under the fire chief. At the time of our initial visit (April 1982), the FIU was headed by a battalion chief with 12 investigators working under him. The

[1] In the other municipalities in Cuyahoga County, investigation is handled by the local police departments, with frequent assistance from the Ohio State Fire Marshal's Office and the Ohio Bureau of Criminal Investigation. This discussion of investigative practices focuses only on practices in the City of Cleveland.

investigators included one captain, five lieutenants, and six firemen, first grade. FIU investigators work in two-man teams and maintain 24-hour coverage.

All FIU investigators must have had at least three years' experience in fire suppression before applying to the unit. In the past few years, there have been many more applicants than positions. Candidates are selected on the basis of interviews; there is no written test for the position of fire investigator. Selectees are sent first for duty with the Fire Prevention Bureau, until there is a place available in a class of the peace officer's course, an abbreviated police academy course required to obtain arrest powers. After completion of this course, the selectee returns to the Fire Prevention Bureau until there is an FIU vacancy.

There is no separate career path in fire investigation. Promotion usually--but not always--means transfer out of FIU. The chief tries to retain investigators when they are promoted, but this depends on the unit's authorized staff levels at various ranks.

The Police Arson Unit is part of the Cleveland Police Department's Major Offense Bureau. This bureau includes separate units for auto theft, homicide, narcotics, and arson. There used to be many more specialized units, but in the last few years these units' responsibilities were transferred back to the general duty detective units working out of the city's six police districts. There is some concern that the Police Arson Unit will be disbanded as well.

The PAU is supervised by a detective sergeant, with eight detectives working under him. PAU does not maintain regular 24-hour coverage, although detectives are notified of all major fires and often work overtime on investigations. The detectives work in two-man teams. Three teams are on duty 8 AM-4 PM Monday-Saturday, and one team covers the afternoon shift 3 PM-11 PM, Monday-Saturday. Thus, no investigators are regularly on duty 11 PM-8 AM Monday-Saturday or all day Sunday.

The PAU detectives are drawn from a variety of sources within the department, including other units in the Major Offense Bureau, general duty detectives, and uniformed patrol. No specific arson investigative training is required for service with the PAU; however, unit detectives have attended a variety of arson and arson-related courses and seminars.

Denver, Colorado

Although Denver has experimented with a number of arson investigative structures including police-fire teams, for about the last 10 years responsibility for fire and arson investigation has rested almost entirely with the fire department's Arson Bureau. The bureau's investigators are empowered to perform the entire investigation from scene examination through development of the criminal case and arrest of the suspect(s). Although the investigators have full arrest powers, they avoid making arrests themselves unless it is absolutely necessary; instead, they rely on regular uniformed patrolmen to make the arrests, once warrants have been issued.

In cases involving fatalities or serious injuries that may result in death, the police department's Homicide Squad participates in the investigation. Unlike the situation in the Bronx and Cleveland, however, the Homicide Squad does not automatically take over such a case. There are no precise guidelines as to which department takes control of such investigations; rather, the decision seems to be based on relative manpower and caseload situations at the time a case arises.

The Denver Arson Bureau is headed by a captain who also is responsible for internal affairs investigations for the fire department. The day-to-day operations of the Arson Bureau are supervised by another captain. (The individual currently holding this position was recently promoted to captain but to this point has been able to remain within the bureau.) Twelve investigators of equal rank complete the staff. Continuous 24-hour coverage is provided by assigning investigators to three eight-hour shifts (3 AM-11 AM, 11 AM-7 PM, and 7 PM-3 AM). All available on-duty investigators respond to all calls.

Investigators for the bureau are chosen on the basis of expressed interest in fire investigation and interviews with bureau supervisors. There is no formal testing for the investigator's position. Neither are there formal requirements for minimum experience in the fire department, although in practice an applicant must have at least three years as a firefighter to be considered.

In the early years of the bureau, applicants often had to be actively recruited; however, in recent years, according to the assistant supervisor, there have been many more applicants than positions available. Once in the bureau, investigators tend to stay for a substantial period of time, despite

the lack of a separate career path within fire investigation. For rank and salary purposes, all of the on-shift investigators fall between the suppression grades of engineer (pumper operator) and lieutenant. They all serve at the pleasure of the fire chief and may return to fire suppression at any time. The only path to promotion for on-shift investigators is to return to suppression at a higher rank. But there are few vacancies at these ranks. The Arson Bureau is thus able to attract career firefighters who are willing to forego promotion in the suppression forces. The few investigators who have left the bureau have done so involuntarily.

The first priority in the training of new investigators is to send them to the police academy. All investigators in the bureau undergo the full police academy course and have full police powers. There is no standard, internally furnished basic arson investigation course. New investigators read into their jobs and observe experienced investigators. If possible, they are sent to the National Fire Academy's investigation course in Emmitsburg, Maryland. The bureau also conducts annual week-long seminars on various relevant subjects.

San Diego County, California

Arson investigation in San Diego County is handled in several different ways depending on the jurisdiction involved. This study focused on the two units with the largest caseloads in the county--the Metro Arson Strike Team (MAST) in the City of San Diego and the Sheriff's Department Arson and Explosion Unit (which provides services to the unincorporated areas of the county and under contract to six smaller municipalities in the county). A few other localities conduct their own arson investigations, but these jurisdictions were not examined in this study. The two major units are described below.

--The MAST Unit

Prior to the establishment of the MAST Unit, arson cases were handled either entirely by the fire department (typically if a suspect was apprehended at the scene of the fire) or by both the fire and police departments, which divided responsibility for the case along traditional lines. Although one burglary detective had been given responsibility for arson

cases, routine geographic case assignment procedures resulted in assignment of many arson cases to someone else. Following a joint fire and police investigation of two serious arsons in 1978, officials began to consider alternative approaches for permanent restructuring of arson investigations.

The MAST Unit was established in June 1980, combining fire and police personnel into a single unit with responsibility for all aspects of arson investigation. (However, an arson-homicide will generally be handled by the Police Homicide Unit.) Under an administrative order by the mayor, MAST was housed in the fire department, which provides training, office equipment, and other supplies for all members of the unit. Salaries are paid by the respective departments.

The MAST Unit is staffed by a fire captain, seven fire investigators (four with the rank of firefighter and three who are fire engineers), a police sergeant and four detectives. Technically, under the chain of command in the unit, the police sergeant reports to the fire captain and also to a lieutenant in the police department. As a practical matter, the two supervisors in the unit work as a team, each primarily concerned with overseeing the activities of the investigators from his respective department. The critical link for making administrative decisions on issues such as work scheduling and staffing is between a batallion chief (who is the supervisor for the fire captain) and the commander of detectives (who is several steps up the ladder from the police sergeant).

Although their relative positions in the command structures of the two departments vary, the fire captain and the police sergeant receive comparable compensation. This is not the case on the investigative level, however, where fire personnel are paid less than police personnel and the supervisors see little likelihood of achieving parity in the near future.

Work schedules are another area in which the fire and police departments have adopted different procedures. Two fire investigators are assigned to each of three platoons and work out of the fire department's headquarters on 24-hour shifts (9 AM-9 AM). The seventh fire investigator works a straight day shift. When an investigator is away from the office, he carries a pager so that he may always be contacted. The police detectives assigned to the MAST Unit are scheduled to work day shifts from 7:30 AM to 4:00 PM. Three

detectives are assigned to perform any follow-up investigation for the three platoons. The fourth detective, and the sergeant if needed, are assigned to especially lengthy or complex cases (such as arson-for-profit cases) and to handle overflow from the workload of the other detectives. The assignment structures are not rigid, and any detective may be called on as needed. In addition to his daytime assignment, each detective is on 24-hour call for seven days on a rotating basis. While on call, the detective takes a city vehicle home at night and is equipped with a pager.

On routine cases, the two fire investigators on duty go to the fire scene in a fully-equipped arson van. Generally, one begins to examine the fire scene while the second remains outside and conducts interviews with witnesses. The detective who is on call (if the fire occurs any time other than between 7:30 AM and 4:00 PM) is not typically called to the scene unless there is a particular reason for him to be involved from the beginning of the investigation.

Since its formation, MAST has been evolving away from the division of responsibility described here and into a true team approach. On our final site visit, members of the unit reported that they were working together on a complete case more frequently rather than splitting the duties along fire and police lines. However, it is important to note that teams are formed on a case-by-case basis, depending on who is on duty at the time of a fire. There are no permanent assignments of fire investigators and police detectives to specific teams.

Personnel in the unit are selected on the basis of their interest in the assignment. There is no specific promotional examination, although the police members must have been in an investigative position prior to applying to MAST. It is possible for fire department investigators to receive promotions and remain within the unit, while promotions for the unit's police members necessitate transfers to other assignments.

--The Sheriff's Arson and Explosion Unit

In the unincorporated areas of San Diego County and in those cities which contract with the sheriff for police services, arson investigation is performed by the sheriff's Arson and Explosion Unit. Although an initial cause determination may be made by a local fire investigator, the sheriff's

detectives conduct a complete scene examination and are responsible for the follow-up investigation as well. In essence, this is an all-police investigative structure.

The Arson and Explosion Unit is staffed by four detectives, under the supervision of a sergeant. The investigators work from 8 AM-5 PM on weekdays but are available for call-out at any hour seven days per week. Each investigator has primary responsibility for a certain region of the county but may provide backup in other areas as needed.

Detectives interested in joining the unit submit applications, which are reviewed by a screening panel of three sergeants. There are no promotions within the unit, although a former investigator recently returned to the unit as its new supervisor.

2.3.2 Investigative Procedures

In general, the investigative process is triggered in all sites by the judgment of the officer in charge of the suppression forces that a fire is incendiary or suspicious. In addition, some investigations may occur in instances where there has been no suppression unit response. Finally, most sites have specified criteria under which investigators are to be alerted as a matter of policy, regardless of the initial determination of the fire's cause. Typically, investigators are called to all fires resulting in a fatality (and in some jurisdictions those causing injury as well) and to all multiple-alarm fires. They are not generally expected to respond immediately to investigate vehicle fires, unless a suspect has already been identified. The fire investigation units in Cleveland and San Diego specify that they will investigate structural fires of undetermined cause (in addition to those classified as incendiary or suspicious), but only if the dollar loss is estimated to be greater than $150 (Cleveland) or $1,000 (San Diego). Most of the sites indicate that they will investigate any fire involving large loss but do not specify a criterion in terms of dollar amount.

As described above, every jurisdiction has its own allocation of responsibility for each component of the arson investigation and a procedure for the timing of each unit's involvement. Of course, this latter issue does not arise in Denver or San Diego County, since only one agency is involved in arson investigation in these jurisdictions. In the Bronx and Cleveland,

the division of responsibility between fire and police units follows the traditional approach, but these two sites differ on the timing of each unit's involvement. The fire marshals and the police detectives are supposed to be on the scene at the same time in the Bronx (although in the past there were problems with timely notification of the police), whereas in Cleveland the fire investigators are more likely to complete their examination before forwarding the case to the police detectives. The situation in the City of San Diego in the early years of the MAST Unit's existence closely resembled that in Cleveland, but with strict procedures to ensure that information was transferred from one investigator to the other (this is particularly important in view of the different schedules worked by fire and police members). Although the MAST fire investigators do not go off duty until 9:00 AM, their reports of investigations conducted are due at 7:30 AM so they will be available to the detective coming on duty in the morning. The overlap in shifts between fire investigators and detectives allows about one hour in which cases can be discussed. Once a case is given to the detective for follow-up, fire investigator involvement does not automatically end, but may continue as needed. As the MAST Unit has evolved over time, fire and police investigators have come closer to the goal of working cases together as a team.

As an investigation develops and a suspect is identified, an arrest may be made by any investigator (since all the fire and police units in our study have arrest powers) or by uniformed police. As a general rule, the investigators involved in the follow-up investigation (i.e. the police in the Bronx and Cleveland and, in the past, in San Diego) are more likely to be involved in making an arrest than their counterparts who made the cause and origin determination, but many arrests are actually made by non-specialized patrol officers. In Denver, where the fire department's unit has full responsibility for all aspects of a case, the investigators generally prefer to obtain an arrest warrant and have it executed by uniformed police rather than making an arrest themselves.

The work involved in presenting a case for prosecution is also more likely to be performed by the investigators conducting the criminal investigation rather than by those who concentrate on the fire scene examination. That is, in all the sites except Denver, the prosecutor appears to have more interaction with police investigators than with fire personnel.

2.4 Arson Prosecution

The site selection process for this study sought to include sites in which felony cases were prosecuted vertically as well as sites with horizontal prosecution, sites where arson received specialized treatment and those where it did not. In this section, we briefly review the procedures in each jurisdiction for initial screening, formal charging, and assignment for trial in arson cases. In subsequent chapters, these processes are described in greater detail, as we discuss our findings and recommendations for improving each step in the adjudication of arson cases.

As we will stress throughout this report, one of the most critical stages in the adjudication process is the initial screening of cases leading to the decision whether to file charges. It is typically the first interaction between investigators and the prosecutor's office and determines whether or not the case will proceed any further. The four sites have developed both formal structures and informal working relationships to facilitate the process of reviewing arson cases for possible prosecution. In some sites, this process also provides the opportunity for the investigator to seek advice from the prosecutor on whether additional investigation might strengthen a case.

In the two sites with specialized arson prosecution (Bronx and San Diego[1]), the screening process is formalized and regarded as highly important. Although there are intake units in both offices, a prosecutor specializing in arson is supposed to screen every case involving a potential charge of arson. In the Bronx, investigators have been instructed to contact the on-call arson prosecutor before making an arrest for arson. Although the arresting officer may present the case to the complaint division for the actual paperwork involved in filing a case (with or without making the phone call), that unit is also supposed to consult the arson unit before filing charges. This makes it almost impossible for a case to be filed without the benefit of screening by an experienced arson prosecutor. Similarly, in San Diego, the intake unit (which may receive cases from investigators other than

[1] In mid-1982, the individual specializing in arson prosecution in San Diego left the prosecutor's office. This discussion describes the system in place during his tenure.

those attached to MAST or the Sheriff's Arson and Explosion Unit) is required to refer the case to the special arson prosecutor or at least consult with him prior to issuing any charges. As a matter of convenience, detectives in the sheriff's Arson and Explosion Unit in San Diego County on occasion present cases to an outlying office of the district attorney, which is supposed to contact the arson prosecutor before filing a complaint.

In Denver, although there is no specialized prosecution, investigators typically take their cases to the attorney in charge of the complaints unit. A good relationship has developed between the investigators and this attorney, despite the fact that he has no formal training in arson prosecution. Of the four study sites, only Cleveland lacks formal or informal arson specialization in the screening process. In Cuyahoga County, most cases are initially screened by the police prosecutors (who are part of the city attorney's office) for filing in the municipal court. It is in this court that preliminary hearings are held to determine whether cases should be bound over to the grand jury and the Court of Common Pleas. The county prosecutor's office becomes involved for the first time once a case reaches the grand jury, (although in special circumstances, a case may be presented to the county prosecutor for direct presentation to the grand jury). Thus, there are two distinct prosecutors' offices involved, neither of which maintain any specialization in arson.

Once a case is accepted for prosecution, it may be handled by several different attorneys or by a single prosecutor, depending on the structure in the jurisdiction. Three of the study sites (Bronx, Denver and San Diego) have predominantly vertical prosecution systems, in which one attorney is technically responsible for a case at every stage of the judicial process from initial appearance through trial and sometimes appeal. (As a practical matter, however, some cases in these sites are handled by more than one attorney.) Cleveland operates on a horizontal prosecution system, where several different attorneys handle a case at different stages in the process.

The Arson/Economic Crime Bureau in the Bronx District Attorney's Office most closely adheres to vertical prosecution in practice, but even here there are variations. Through the procedures described above, attorneys within the unit are involved in initial screening of all arson cases. However, since all defendants must be arraigned soon after arrest, an assistant

district attorney from the arraignments unit handles the initial appearance, where bail is set. Subsequently, the case folder is forwarded to the Arson/Economic Crime Bureau, where the unit's supervisor reviews the case and assigns it to an attorney. Theoretically, the assistant district attorney to whom the case is assigned is then responsible for all further proceedings in the case--preliminary hearing, grand jury presentation, plea negotiations, trial, and appeal. (However, we did observe instances in which more than one attorney handled different aspects of a case, to compensate for schedule conflicts or other problems.) If possible, the prosecutor handling a case in the Bronx will generally expedite the grand jury presentation, since the return of an indictment removes the requirement for a preliminary hearing where the defense may benefit from early discovery of the government's case. If there has been any opportunity for plea negotiations, the prosecutor may avoid both the preliminary hearing and the grand jury if the defendant will agree to waive the indictment and plead to an information containing charges negotiated by the attorneys. This is fairly common practice in the Bronx, since it results in a felony conviction and early resolution of a case. In general, individual attorneys seem to be able to exercise considerable discretion in the disposition of their caseloads. One limitation does exist, however, as a result of office policy. Attorneys are not permitted to dismiss a case post-indictment, but instead are expected to go to trial even if weaknesses have developed since the case was presented to the grand jury.

In San Diego, the decision on whether a case receives specialized, vertical prosecution is made at the screening stage on a case-by-case basis. We classify this site as employing vertical prosecution because the arson cases involving complex issues or posing potential difficulties are handled vertically. According to procedures in place during the study period, all arson cases originating anywhere within the county of San Diego were supposed to be reviewed by the designated arson prosecutor in the district attorney's office, whether the cases were presented directly to this attorney by investigators or were first submitted to the office's complaint division (which was under instructions to refer them to the special arson prosecutor). Originally, when the decision was made to designate a prosecutor to handle arson cases, it was intended that this attorney would also try <u>all</u> the arson cases that were issued. This seems to have worked at

first, but ultimately there were too many arson cases for one prosecutor to handle. Thus, the specialized prosecutor developed a procedure under which he screened all arsons and retained for vertical prosecution those in need of his expertise. Other arson cases, such as straightforward spite and revenge cases without complex cause and origin issues, were handled like most other felonies. These cases were prosecuted in a horizontal manner, with one attorney presenting the case at the preliminary hearing and another taking the case to trial or negotiating a plea.

This approach is now being modified. Arson cases meeting certain criteria designed to detect seriousness or complexity are being screened by a new arson special arson prosecutor, who then decides which cases to retain himself and which to allow to proceed routinely (along with the other arsons not receiving specialized screening). The prosecution structure in San Diego is thus in flux; the most efficient and effective approach to arson prosecution in that jurisdiction remains to be identified.

In Denver, cases are essentially handled vertically after screening for acceptance. However, the district attorney in Denver has long had a policy opposing specialization by type of crime. Specialization after filing would, in fact, necessitate a major change in current operations, since attorneys are assigned to courtrooms; the designation of a specialist for arson would work only if all arson cases were to be heard by the same judge. Thus, there are no plans to restructure arson prosecution in Denver. Despite this organization, however, a form of specialization has developed. As a matter of local practice, most arson cases are presented to one attorney, who not only screens them for issuing but also provides informal advice on case development. Moreover, one particular prosecutor has handled a few arson cases and, since he has been involved in giving presentations at national workshops on arson, has also been asked to assist in the arson bureau's annual seminar.

In Cleveland, responsibility for arson prosecution (as for all other felonies) is divided not only among numerous prosecutors but also between two offices. Although it is possible for cases to be presented directly to the grand jury by the county prosecuting attorney's office, the most typical pattern of case processing involves the police prosecutor as well. Arson cases are generally presented to the police prosecutor for charging, as

described earlier. Once a case is bound over to the grand jury, it is handled by an attorney assigned to the grand jury unit in the county prosecuting attorney's office. Following the return of an indictment, the defendant is arraigned in Common Pleas Court, and the case is handled by the appropriate "room prosecutor" of the criminal division. Under this system, any member of the team of three assistants assigned to a courtroom in which an arson case is to be tried might work on that case. Thus, the attorney who is responsible for trying or otherwise disposing of an arson case does not receive the case until after many of the preliminary stages in the process have been completed.

In summary, the allocation of responsibility for different aspects of arson prosecution varies dramatically from site to site. In the Bronx and San Diego, all arson cases receive special treatment. In the other two sites, Denver and Cleveland, arson cases are treated like all other felony cases.

2.5 Summary

We have detailed in this chapter the variations in arson problems, statutory framework, investigative structures, and prosecutorial organizations that exist in the study sites. Figure 2.3 is intended to provide the reader with an easy reference to the general characteristics of the organization and procedures in each site. As is evident from the discussion in this chapter, each site is unique. There is no way to hold any one local condition constant in order to compare a particular approach in one jurisdiction to its counterpart in another. Although this variation in organizations and procedures is inherently interesting and gives our study a broad range of experience to examine, it also necessitates constant qualification of most of the findings. Thus, throughout this report practices and results are described with careful reference to the local arson problem, a unique aspect of investigator/prosecutor relationship, or whatever other special circumstances will help the reader understand the observations being made.

However, by studying the prosecution of arson cases in several different environments, we <u>can</u> begin to describe the strengths and weaknesses of different investigative and prosecutorial structures. To the extent that arson prosecution is helped or hindered by statutory provisions, we will discuss this. Finally, we can describe the informal approaches that have evolved to facilitate the adjudicative process within more structured organizations and rules of procedure.

Figure 2.3

Overview of Site Characteristics[a]

	Bronx	Denver	San Diego	Cleveland
Investigation Structure	Divided Responsibility	All-Fire	Fire-Police Team (City); All-Police in portions of the County	Divided Responsibility
Type of Prosecutorial Screening	Specialized	Non-Specialized	Specialized	Non-Specialized
Timing of Prosecutorial Screening	Normally Pre-Arrest	Pre-Filing (normally Pre-Arrest)	Pre-Filing (Pre- or Post-Arrest)	Pre-Filing (normally Post-Arrest)
Prosecution Structure	Specialized/Vertical	Non-Specialized/Vertical After Screening	Specialized/Vertical	Non-Specialized/Horizontal

[a]The information in this figure reflects procedures in place during the study period.

3.0 CASE CHARACTERISTICS AND ARSON CASEFLOW SUMMARY

This chapter describes the basic characteristics of the arson cases included in the study and summarizes the key caseflow findings from this data set. The description of the cases sets a context for the analysis and conclusions of the study. It represents a profile of the "typical" arson case at the investigative and prosecutorial stages. The caseflow findings represent basic information on the intermediate and final outcomes of arson cases: that is, the measures of what happens to arson cases entering the system at the investigation stage and the prosecution stage. The caseflow data show the progression (and attrition) of cases at the key decision points in their processing: identification of suspects, presentation to the prosecutor, prosecutorial screening, adjudication outcome, method of disposition, charges on conviction, and sentencing patterns.

These caseflow findings, in turn, set the stage for a series of chapters which seek to explain why arson cases have these outcomes--in terms of evidentiary patterns, investigative and prosecutorial structures, and individual case decisions. In short, Chapter 3 essentially describes the data and the basic patterns of case outcome; Chapters 4-6 analyze and explain these outcomes.

The major findings presented in Chapter 3 are the following:

- Measured as a percentage of fires determined to be arson, prosecution and conviction rates are extremely low (7 percent and 4 percent, respectively across the four study sites.
- Measured as a percentage of arson cases accepted for prosecution, conviction rates are similarly high to those found in other categories of criminal cases (79 percent, across the four sites).
- Thus, most arson cases are eliminated from the possibility of prosecution during the investigation stage, particularly between the determination of arson and presentation of the case to the prosecutor; the case attrition during the prosecution stage is comparatively insignificant.
- A comparison of motive breakdowns in the randomly selected investigation sample and the sample of prosecutions suggests that fraud and vandalism cases are more difficult to move from investigation to prosecution than are spite and pyromania cases. Spite-and-revenge cases constituted one-half of the sampled arson prosecutions.
- In three of the four study sites, trial conviction rates were substantially lower than overall conviction rates. Similar discrepancies do not appear in studies of other types of criminal cases; thus, while other factors (such as filing and trial/dismissal policies) may be involved, a more likely explanation is that convictions are simply more difficult to win in arson trials than in other criminal trials.

3.1 Samples and Case Characteristics

3.1.1 Samples

The statistics presented in this chapter are based on the randomly selected investigation sample of 400 cases and the 408-case augmented prosecution sample. The investigation sample is used to analyze caseflow from an early point in the investigation process to a case's disposition, either as an investigation or a prosecution. The augmented prosecution sample is used to analyze caseflow from the point the case is accepted for prosecution to its final disposition. This dual analysis includes sufficient numbers of cases to document all of the key parts of arson caseflow. It is important to document and understand the full processing of arson cases from the point the fire is determined to be arson in order to know, most simply, how many detected arsons result in prosecution and conviction. At the same time, it is important to know the fate of cases accepted for prosecution. Since we anticipated that only a small number of cases in the investigation sample would result in prosecution, we oversampled prosecuted cases. The sample of cases accepted for prosecution constitutes a larger and richer sample for documenting the second major part of arson caseflow. Taken together, the two caseflow analyses show that the bulk of attrition in arson cases occurs during the investigation stage rather than the prosecution stage.

3.1.2 Case Characteristics[1]

The vast majority of the cases in the randomly selected investigation sample involved a single-fire incident[2] (90 percent) with little variation across sites. Eight percent of the cases involved two to five fires and only two percent involved more than five fires. The sample of 400 cases involved a total of 506 fire incidents.[3]

---

[1] Unless otherwise noted, this discussion of case characteristics is based on the randomly selected investigation sample of 400 cases. The figures reported are therefore subject to sampling error. Where it is important to the point being made, we will note confidence intervals and whether differences are statistically significant.

[2] Although the unit of selection for the investigation sample was a single fire, if the sampled fire was linked with others in the course of an investigation, we considered the "case" to include all fires being investigated together. Thus, the finding that an overwhelming majority of the cases involved single-fire incidents is not an artifact of our sampling methods but should be an accurate representation of overall case characteristics.

[3] However, we only collected data on a maximum of 5 fires per case.

The profile of arson targets in the study sample appears to reflect the building stock and the nature of the arson problem in the four jurisdictions under study. Overall, 76 percent of the cases involved structural fires, with the Bronx and Cleveland experiencing particularly high percentages of such fires (95 percent and 90 percent, respectively). Denver's cases were 69 percent structural while San Diego's were only 49 percent structural. The difference in San Diego was made up by vehicle fires (28 percent as opposed to just 3 percent in the Bronx), grass and wildland fires (5 percent) and "other" fires (14 percent). Residential buildings predominated among cases of structural fires in all four sites--but most heavily in the Bronx and Cleveland (89 percent and 79 percent of the cases involving structural fires). Only 57 percent of Denver's structural fire cases involved residential buildings, while 20 percent involved "public buildings" (largely mental hospitals, jails, hotels, and schools) and 23 percent involved commercial buildings.

The majority of the sampled structural fire cases (59 percent) involved buildings that were in use (even if unoccupied at the time of the fire) as opposed to vacant. As might be expected, fires in vacant buildings contributed much higher percentages of the structural fires in the Bronx and Cleveland (54 percent and 47 percent) than they did in Denver and San Diego (16 percent and 18 percent). Persons were present when the fire started in 36 percent of the structural fire cases (the range was 21 percent in Cleveland to 48 percent in Denver).

In general, the cases in our randomly drawn investigation sample resulted in very few deaths and injuries to civilians or firefighters and involved surprisingly small estimated dollar loss. Only three percent of the random sample of cases involved death or injury, with virtually no variation across the four sites. Altogether, the total of 884 cases in the investigation and augmented prosecution samples involved 16 civilian fatalities and two firefighter fatalities, as well as injuries to 77 civilians and 45 firefighters.

The dollar-loss figures are based on the damage estimated by fire suppression forces or arson investigators and entered on their official reports. They do <u>not</u> reflect adjusted loss and damage figures developed by insurers. Thus, they must be treated <u>only</u> as rough estimates. Moreover, in

one of our sites, the Bronx, damage estimates are either rarely made or rarely entered on the incident report received by the fire marshal. Thus, the dollar-loss breakdowns only include a few cases from the Bronx. However, these qualifications do not affect the major conclusion: the vast majority of the cases under study involved very small dollar loss. Nine percent of the cases in the randomly selected investigation sample with estimates noted involved <u>no</u> dollar loss, 60 percent involved losses up to $1,000, and 84 percent involved losses under $5,000. Only three percent of the sampled cases involved fires causing more than $50,000 damage. The mean dollar loss was $8,458 and the median was $500. These figures conflict with the popular image of the arson fire as almost invariably a serious fire. Indeed, we found that many arsons are small trash fires or fires set in clothing, which are quickly extinguished and cause little damage. However, this should in no way undermine the view that arson is an extremely serious crime. It may be a very small minority, but <u>some</u> small trash fires and fires set in clothing do become serious and deadly fires. Also, such fires may be intended as direct personal threats. However intended, they often contribute to a climate of fear in the community. Thus, screening and charging decisions should be based on the <u>potential</u> endangerment and damage presented by the fire as much as on the actual damage caused. As will be discussed in Chapter 5, however, it is often difficult to convince prosecutors burdened with heavy caseloads of the importance of this concept.

Arson motive is one of the principal classifying factors for this study's analysis. Judgments as to the motive involved in an arson were based on the information available in the investigator's and/or prosecutor's file. The decisions made by the study team were usually quite straightforward given the facts of the case. However, the breakdowns are influenced by the large percentage of cases in the investigation sample for which there was very little information developed; in most of these cases, it was impossible for the investigators or for us to determine the motive.

In our analysis of motive, we used a modified version of the motive typology recommended by the National Fire Protection Association (NFPA). This modified typology is shown in Figure 3.1. Since there were very few sampled cases in the "civil disorder" and "crime concealment" categories, these are included in an "other" category.

Figure 3.1

Arson Motive Typology

Arson-for-Profit (Fraud)

This arson motive can assume a variety of forms, all of which constitute rational acts:

--insurance fraud: to stop financial loss, cover the cost of property improvements, or increase gains over the market value of a property;

--tax fraud: where fire damage to property enables the owner to use the loss as an income tax shelter;

--welfare fraud: whereby a public housing resident obtains relocation funds by damaging his or her current dwelling by fire;

--parcel creation: through the destruction (partial or complete) of an existing structure to enable more lucrative development of the land or building (e.g., condominium conversion);

--elimination of competition: in which a business is burned down by a competitor (e.g., discos, pizza parlors, restaurants);

--coercion: for example, by striking employees to apply pressure for more favorable negotiations.

Pyromania or other Psychological Disorder

Sexual gratification or some other form of psychological gain is derived from this type of arson, which is wholly irrational.

Vandalism

Often committed by juveniles, this type of firesetting is a special instance of a destructive act, perpetrated out of anger, peer group pressure, boredom, or frustration, that is not directed against any particular individual.

Spite or Revenge

This results from anger or frustration between lovers, relatives, or persons involved in racial or interpersonal disputes.

Civil Disorder

This type of arson bears a certain resemblance to spite and revenge, but it is directed against society at large.

Crime Concealment

This type of firesetting is designed to conceal the perpetration of another crime such as homicide or burglary.

SOURCE: This typology is based on National Fire Protection Association, Standard No. 901, "Uniform Coding for Fire Protection." Some examples and explanatory material have been added.

Table 3.1 shows the motive breakdowns for the investigation and augmented prosecution samples. The most striking aspects of this comparison are the differences in percentage share contributed by several of the motives between the investigation and augmented prosecution samples. Spite cases constitute a small percentage of the randomly selected investigations but exactly half of the prosecuted cases. Pyromania cases also contribute a larger percentage of the augmented prosecution sample than of the investigation sample. The opposite trend is apparent for vandalism cases; this category constitutes a larger percentage of the investigation sample than of the augmented prosecution sample. This reversal holds true for all study sites, as shown in Table 3.2.

These statistics suggest that, upon initial investigation, many trash and vacant building arsons are considered to be the product of vandalism, but that very few of these reach prosecution. Indeed, in very few of these cases are suspects even identified. On the other hand, while a relatively small percentage of arsons are determined upon investigation to be spite or pyromania fires, a much larger percentage of these cases reach prosecution.

Fraud cases constituted very similar percentages of the investigation sample in all four sites, but they made up much larger percentages of the prosecuted cases in the Bronx and Cleveland than in San Diego and Denver. Indeed, in Denver, there were no fraud cases in the augmented prosecution sample. As will be discussed in Chapter 5, this may suggest that more stringent standards are applied to fraud cases than to other arson cases in Denver.

Dollar loss tended to be much higher in fraud cases than in cases involving other arson motives. Table 3.3 shows the median dollar loss totals per case for the arson motive categories in the investigation and augmented prosecution samples. (It should be emphasized once again that very few Bronx cases are reflected in these figures because dollar loss estimates are rarely available in that site.) For all motive categories except fraud, dollar loss per case tended to be higher in prosecuted cases than in the random sample of investigated cases. This suggests that dollar loss as a measure of case seriousness may play a significant role in prosecutorial screening of some major categories of arson cases. On the other hand, the dollar loss figures for fraud cases are similar in the two samples. Because dollar loss tends

CONTINUED

1 OF 4

Table 3.1

Breakdown of Arson Motives
in Investigation and Augmented Prosecution Samples, All Sites

Motive	Percentage of Sample: Investigation (n=400)	Percentage of Sample: Augmented Prosecution (n=408)
Fraud	6	9
Pyromania	5	19
Spite	15	50
Vandalism	31	9
Other	4	6
Unknown	39	7[a]
Total	100	100

[a]These unknowns are the result of lack of documentation in the case files rather than from a real inability to determine motive in prosecuted cases.

Table 3.2

Breakdown of Arson Motives in
Investigation and Augmented Prosecution Samples, by Site

MOTIVE	Bronx (n=104) / (n=100)	Denver (n=101) / (n=100)	San Diego (n=100) / (n=100)	Cleveland (n=103) / (n=100)
	Percentage of Augmented Prosecution Sample / Percentage of Investigation Sample			
Fraud	16 / 7	0 / 6	5 / 6	15 / 5
Pyromania	9 / 2	24 / 7	29 / 6	13 / 5
Spite	58 / 8	54 / 19	47 / 17	41 / 16
Vandalism	4 / 41	12 / 16	6 / 25	15 / 42
Other	3 / 1	5 / 2	12 / 9	4 / 4
Unknown	10 / 41	5 / 50	1 / 37	12 / 28
Total	100 / 100	100 / 100	100 / 100	100 / 100

Table 3.3

Total Dollar Loss Per Case, by Motive, All Sites

	Investigation Sample		Augmented Prosecution Sample	
MOTIVE	n	Median $ Loss	n	Median $ Loss
Fraud	17	10,000	24	9,150
Pyromania	16	500	57	500
Spite	46	625	125	950
Vandalism	77	500	27	2,000
Other	15	690	15	2,000
Unknown	111	400	21	1,000

generally to be higher in fraud cases than in other arsons, it does not appear to be as significant a factor in prosecutorial screening of fraud cases as in screening of other arson cases. The relationship between measures of fire seriousness, including dollar loss, and prosecutorial screening decisions is discussed in detail in Chapter 5.

The cases in the random sample were investigated predominantly by the local arson investigation unit, with surprisingly rare involvement of state and federal investigative agencies or investigators hired by insurance companies. Moreover, prosecutors became involved in investigations prior to formal case presentation--e.g. through attendance at the fire scene or provision of advice on warrants, arrests or other legal matters--in only a very small percentage of the cases. Table 3.4 summarizes the frequency of investigative involvement by agencies other than the local arson investigation unit. (Although this could be a result of lack of file documentation, the rarity of outside investigative involvement was confirmed by interviews with arson investigators and prosecutors.) Prosecutorial involvement in investigations is more common in prosecuted cases than in cases not reaching prosecution and occurs more frequently in the Bronx and Cleveland (32 percent and 28 percent of prosecuted cases) than in San Diego and Denver (7 percent and 6 percent). Cleveland has no specialized screening or prosecution of arson cases, while during the study period San Diego had fully specialized and centralized handling of arson cases. Thus, one might expect their places in the order of frequency of prosecutor involvement to have been reversed.

On the average, three persons were interviewed in the course of each investigation in the random sample. In 78 percent of the cases, four people or fewer were interviewed, while in only four percent of the cases were more than 10 people interviewed.

The 408 prosecuted cases involved 471 defendants. Eighty-nine percent of the cases involved one defendant, eight percent had two defendants, and three percent involved three defendants. One case each involved four and five defendants. Defendants were classified as to their relationship to the property burned and/or to the victim of the arson. These classifications overlapped to a certain extent; that is, in some cases, the defendant was found to have a relationship both to the property and to the arson victim. (For example, in a spite arson involving a boyfriend-girlfriend dispute in a

Table 3.4

Investigative Involvement by Agencies
other than the Local Arson Investigation Unit, All Sites

Type of Agency	Percentage of Sample: Investigation (n=400)	Percentage of Sample: Augmented Prosecution (n=408)
State investigative agencies	0	4
Federal investigative agencies (e.g. FBI, ATF)	2	3
Insurance investigators	1	2
Other investigative agencies	2	4
Prosecutors (prior to formal case presentation)	3	18

rented apartment, the defendant's relationship to the property would be "tenant" and the defendant's relationship to the victim would be "acquaintance/neighbor/boyfriend/girlfriend.") Table 3.5 and 3.6 summarize these relationships for prosecuted defendants.[1]

The figures in these tables essentially reflect the motive breakdowns of the cases in our sample. In all sites, "tenant" and "no relationship" were the most common categories of relationship to property burned, thus reflecting the predominance of spite and pyromania cases in the augmented prosecution sample. The higher percentages of "owners" and "alleged torches" in the Bronx and Cleveland reflect the higher incidence of fraud arsons in those jurisdictions. The figures in Table 3.6, showing the predominance of "acquaintance/neighbor/boyfriend/girlfriend" and "no relationship," reflect the predominance of spite and pyromania cases in our augmented prosecution sample. The relatively small percentage of victims classified as "family members" suggests that spite arson victims are more likely to be non-family acquaintances such as boyfriends or girlfriends than actual family members.

The mean age of the defendants was 31 years and it required, on average, approximately seven months (220 days) to investigate and prosecute their cases.[2] The mean case investigation time[3] was slightly over one month (40 days); however, the median was zero, reflecting the fact that over one-half of the arrested defendants were apprehended the same day the fire occurred. This quick-arrest pattern has been discovered in studies of other crimes as well.[4] Mean prosecution time[5] was six to seven months (204 days), and median prosecution time was 129 days.

---

[1] These data are available only for prosecuted defendants.

[2] This is a measurement from the earliest fire in the case to final disposition (excluding sentence and appeal) of the last defendant.

[3] Measured from earliest fire to earliest warrant, arrest, indictment or information, whichever came first.

[4] See, e.g., P. Greenwood and J. Petersilia, The Criminal Investigation Process (Santa Monica, CA: The Rand Corporation, 1975).

[5] From the defendant's warrant, arrest, indictment or information, whichever came first, to the defendant's final disposition, excluding sentencing and appeal.

Table 3.5

Relationship of Defendant[a]
to Property Burned, Augmented Prosecution Sample, by Site

	Percentage of Defendants				
	Bronx (n=88)	Denver (n=63)	San Diego (n=60)	Cleveland (n=62)	Total (n=290)
Owner	20	5	10	20	14
Alleged "Torch"	1	0	4	3	2
Tenant	57	71	23	45	50
No Relationship	22	24	63	32	34
Total	100	100	100	100	100

[a]These classifications were not coded for all defendants; thus, the total numbers are smaller than the total number of defendants in the augmented prosecution sample.

Table 3.6

Relationship of Defendant[a]
to Victim of Arson, Augmented Prosecution Sample, by Site

	Percentage of Defendants				
	Bronx (n=78)	Denver (n=71)	San Diego (n=90)	Cleveland (n=78)	Total (n=317)
Acquaintance/ Neighbor/Boyfriend/ Girlfriend	41	55	32	49	43
Family Member	14	18	10	6	12
Former Employee	0	6	13	7	7
Same Person[b]	21	0	2	12	9
No Relationship	24	21	43	26	29
Total	100	100	100	100	100

[a]These classifications were not coded for all defendants; thus, the total numbers are smaller than the total number of defendants in the augmented prosecution sample.

[b]These are fraud cases in which the defendant was the owner of the property burned.

3.2 Caseflow Findings

In this section we present the major outcome patterns revealed in the caseflow analysis of the investigation and augmented prosecution samples.

3.2.1 Investigation Sample Caseflow

Overall Caseflow Findings

As discussed earlier, the investigation sample comprises 100 randomly selected fires determined to be arson in each of the four study sites. Analysis of this sample of 400 cases allows us to track arson cases as far as they go in the system. The fundamental conclusion is that a very small percentage of fires determined to be arson result in prosecution or conviction. This holds true in all four study sites. Figure 3.2 depicts the overall investigation sample caseflow. Suspects were identified in only 29 percent of the cases;[1] 11 percent were presented for prosecution (32 percent of those with identified suspects); and seven percent were accepted by the prosecutor as adult cases (78 percent of adult cases presented). Overall, only four percent of the investigation sample cases resulted in any adult conviction (that is, conviction of any defendant on any charge), but this represents 59 percent of the cases accepted for prosecution.[2] As will be

[1] This figure becomes even more significant when our broad definition of "suspect" is considered. We took as a suspect any named person associated with the fire by evidence suggesting motive, opportunity or other evidence linking that persons to the act of arson or to the fire scene. Thus, a resident of an apartment complex who had had a fight with and threatened the landlord a few hours before the fire was considered a possible suspect, even if investigators were unable to develop additional incriminating evidence. Similarly, if investigators knew the name of a building's owner and the case file contained information on financial problems, overinsurance, or tax arrearage, the owner was considered an arson-for-profit suspect. On the other hand, unidentified persons believed to be involved in arsons were not considered "suspects" for purposes of this study.

[2] The 95 percent confidence intervals for these outcomes as percentages of all sampled investigations are as follows:

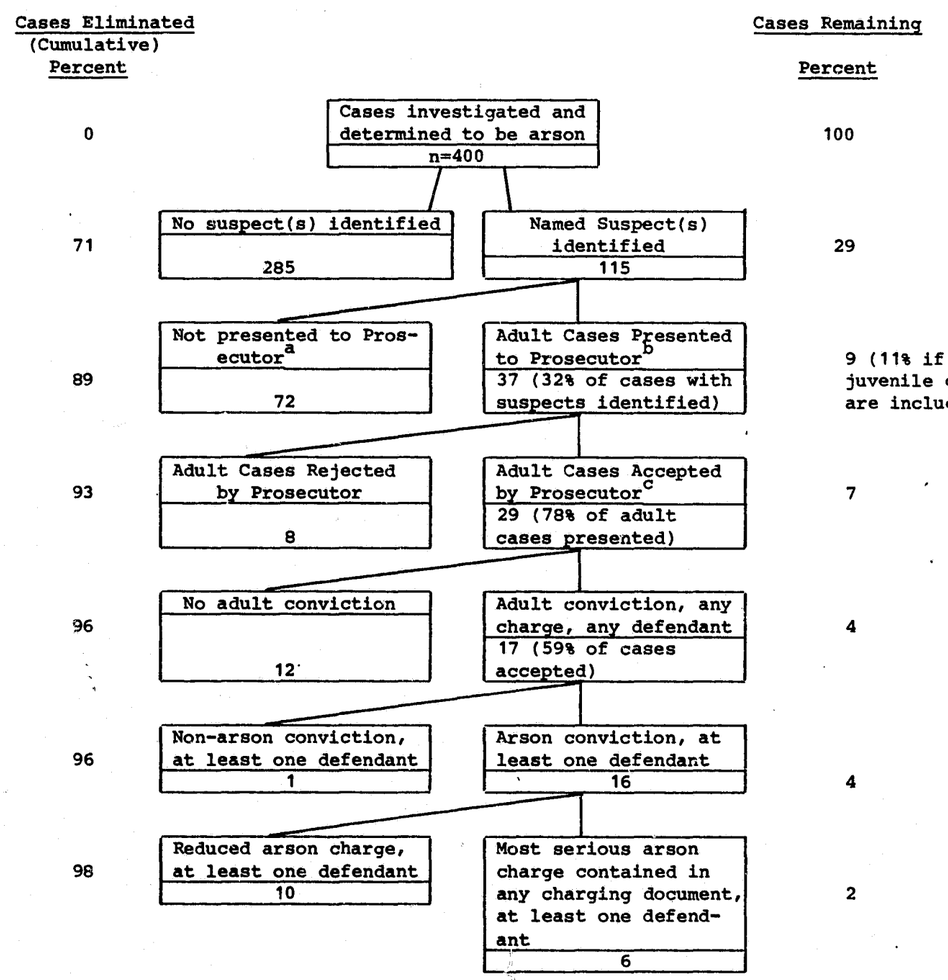
Suspect identified--29 percent (± 4.4 percent)
Presented for prosecution--11 percent (± 3.0 percent)
Accepted for adult prosecution--7 percent (± 2.5 percent)
Any adult conviction--4 percent (± 2.0 percent).

If the outcomes are calculated as a percentage of cases reaching the previous step (e.g. accepted cases as percentage of presented cases rather than of total cases), the confidence intervals are:

Suspect identified--29 percent (± 4.4 percent)
Presented for prosecution--32 percent (± 8.5 percent)
Accepted for adult prosecution--78 percent (± 13.3 percent)
Any adult conviction--59 percent (± 17.9 percent).

Figure 3.2

Investigation Sample Caseflow Statistics: Interim and Final Case Outcomes



[a] Includes six cases handled through juvenile counseling.

[b] In addition, six juvenile cases were presented.

[c] In addition, six cases were referred to juvenile prosecution.

discussed in Section 3.2.2, the conviction rate based on the augmented prosecution sample is substantially higher (79 percent) than the rate based on the investigation sample. Since it is measured from a universe of cases rather than a sample and covers a longer time period, the higher figure based on the augmented prosecution sample is both reconcilable with the investigation sample figure and believable as a finding.

Nevertheless, the overall investigation sample caseflow shows a very low conviction rate, if cases are tracked from the point of arson determination. Moreover, the four percent figure reflects those cases in which any conviction was obtained. Only two percent of the sample (6 cases of the 400) resulted in conviction of at least one defendant on the most serious arson charge alleged.

These overall caseflow statistics are very similar to other incident-based measures of arson case outcomes. (In Section 3.3 we compare our arson caseflow statistics to caseflow statistics for other felonies.) A survey of 174 cities conducted by Abt Associates in 1978 revealed a conviction rate of 5.4 percent--based on the total of arson and suspicious fires.[1] This is quite close to the conviction rate from the investigation sample in the present study (4 percent), especially since the latter is based on fires determined to be arson--suspicious fires are not included.

Our investigation caseflow findings also appear to be congruent with data from the Uniform Crime Reporting program (UCR), although the UCR data on arson are not perfectly comparable. Since it concentrates on data of interest to law enforcement agencies rather than to prosecutors, the UCR program emphasizes rates at which offenses are cleared by arrest.[2] By contrast, since our study is largely concerned with data of interest to prosecutors, we

---

[1] Stephen H. Webster and Kenneth E. Mathews, Jr., A Survey of Arson and Arson Response Capabilities in Selected Jurisdictions (Washington, DC: National Institute of Law Enforcement and Criminal Justice, LEAA, 1979), pp. 11-12.

[2] An offense is cleared by arrest or solved for crime reporting purposes when at least one person is: 1) arrested; 2) charged with the commission of the offense; and 3) turned over to the court for prosecution (whether following arrest, court summons, or police notice). U.S. Department of Justice, Federal Bureau of Investigation, Uniform Crime Reporting Handbook (Washington, DC: U.S. Government Printing Office, 1980), p. 40.

did not systematically collect data on clearances by arrest; rather we began with arson incidents and emphasized case presentation and screening. The stage in our caseflow that is probably most closely equivalent to clearance by arrest is that of presentation to the prosecutor. For a variety of reasons, some arrest cases are never presented to the prosecutor; conversely, some cases presented to the prosecutor never involve an arrest. If we assume that these two groups of cases roughly cancel each other out, then the two rates should be roughly comparable and indeed they appear to be very similar. The UCR reports that the 1981 rate of clearance by arrest for arsons in 55 cities with populations of 250,000 and above (the category into which all four of our sites fall) was 10.7 percent;[1] the presentation rate from our investigation sample was 10.75 percent.

Variations Across Sites

As noted above, arson conviction rates based on the investigation sample were extremely low in all four study sites. Table 3.7 depicts key investigation sample caseflow statistics by site. The range in rates of case acceptance as a percentage of total cases in the sample was five percent (Bronx) to nine percent (Cleveland) and the range in rates of "any conviction" (also as a percentage of the total sample) was one percent (Bronx) to six percent (San Diego and Cleveland).

However, the sites reached these similar acceptance and conviction rates by somewhat different paths. The low conviction rate in the Bronx resulted primarily from a low rate of suspect identification (10 percent). This, in turn, is largely explained by the substantial number of arsons in vacant buildings which makes suspect identification particularly difficult. Half of the Bronx cases in which suspects were identified were presented for prosecution and all of those were accepted. Only one of the five cases accepted for prosecution resulted in a conviction, but these numbers are very small[2] and the Bronx's conviction rate based on the much larger prosecution

---

[1] Crime in the United States, 1981 (Washington, DC: Federal Bureau of Investigation, 1982), Table 19, p. 153.

[2] Indeed, within the limits of the sample size by site (n=100), the rates of presentation, acceptance, and conviction do not differ significantly across the sites. However, the discussion here treats them as suggestive of patterns that are confirmed by interview data.

Table 3.7

Investigation Sample Caseflow, by Site[a]

SITE	Number of Cases	Percent With Named Suspects Identified	Percent Presented for Prosecution (Adult Cases)	Percent Accepted (Adult Cases)	Percent With Any Conviction
Bronx	100	10	5	5	1
Denver	100	41	15[b]	8	4
San Diego	100	32	7[c]	7	6
Cleveland	100	32	10	9	6

[a]All percentages are based on total sample from the site.

[b]In addition, three juvenile cases were presented; thus, the overall presentation rate was 18 percent, or 44 percent of the cases with suspects.

[c]In addition, three juvenile cases were presented; thus, the overall presentation rate was 10 percent, or 31 percent of the cases with suspects.

sample is much higher (81 percent). Thus, it appears that the most problematic stage in the Bronx is the identification of suspects.

By contrast, investigators in Denver identified suspects in a much larger percentage of the cases (41 percent). Roughly the same percentage of cases with suspects was presented to the prosecutor in Denver (44 percent) and in the Bronx (50 percent). However, more significant attrition in Denver occurred at the prosecutorial screening stage than in any other site: seven of 15 adult cases presented for prosecution were rejected (a rate of 47 percent). In Denver, six fraud cases were presented and all were rejected. As will be discussed in Chapter 5, these variations result, at least in part, from differing presentation and screening processes in the Bronx and Denver.

In San Diego and Cleveland, the caseflow data suggest slightly lower rates of suspect identification (32 percent in both cities) than was true in Denver. But most cases were eliminated between suspect identification and case presentation; in both cities, only 31 percent of cases with suspects were presented. Both San Diego and Cleveland had very high rates of case acceptance (100 percent and 90 percent of presented adult cases, respectively).

While the result is a very low conviction rate in all four cities, the data on the interim stages seem to identify three stages at which major attrition occurs: initial identification of suspects in the Bronx; investigative case development in San Diego and Cleveland; and presentation/screening in Denver.

Variations Across Arson Motives

Table 3.8 depicts key investigation sample caseflow statistics by motive.[1] Pyromania and spite cases display substantially higher conviction rates than do the other categories. Fraud cases display a low presentation rate (31 percent of cases with suspects) and a low acceptance rate (31 percent of cases presented). Vandalism cases also display a low presentation rate (31 percent of cases with suspects) and a relatively low acceptance rate (50 percent of cases presented). These figures suggest that fraud and vandalism cases are particularly difficult to move from the investigation to

[1] Again, the consequences of sample size limitations must be noted: numbers of cases in several motive categories are too small to support measurement of statistically significant differences. Thus, the patterns described can only be considered suggestive.

Table 3.8

Investigation Sample Caseflow Statistics by Motive[a]

MOTIVE	Number of Cases	Percent With Named Suspects Identified	Percent Presented for Prosecution (Adult Cases)	Percent Accepted (Adult Cases)	Percent With Any Conviction
Fraud	24	42	13	4	4
Pyromania	20	100	50	45	30
Spite	60	72	25[b]	23	10
Vandalism	124	15	2[c]	2[e]	1[f]
Other	16	44	19	13	13
Unknown	156	10	2[d]	1	1

[a] All percentages are based on total sample in the motive category.

[b] In addition, three juvenile spite cases were presented; thus, the overall presentation rate was 30 percent, or 42 percent of the cases with suspects.

[c] In addition, two juvenile vandalism cases were presented; thus, the overall presentation rate was four percent, or 26 percent of the cases with suspects.

[d] In addition, one juvenile case with unknown motive was presented; thus, the overall presentation rate was three percent, or 25 percent of the cases with suspects.

[e] One adult vandalism case was rejected, but this did not change the percentages from cases presented to cases accepted.

[f] One vandalism case resulted in no conviction, but this did not change the percentages from cases accepted to cases with any conviction.

the prosecution stage. As will be discussed in detail in subsequent chapters, the problem with vandalism cases is usually the relative lack of strong evidence, while in fraud cases the problem is often that the evidence is extremely complex and conflicting. Moreover, prosecutorial screening of fraud cases may be more stringent.

By contrast, pyromania cases exhibit relatively high rates of presentation (50 percent of cases with suspects) and acceptance (90 percent of cases presented). Forty-two percent of the spite cases with suspects were presented and 95 percent of the adult spite cases presented for prosecution were accepted. These figures reflect the fact, to be detailed in subsequent chapters, that confessions are more common in pyromania cases, while in spite cases evidence clearly linking the defendant to the crime and establishing the motive for the arson is more commonly available.

In Table 3.1 above, we presented a breakdown of cases in the investigation sample according to the arson motive categories assigned by the study team. Fires attributed to vandalism and fires for which the motive could not be determined together constituted 70 percent of the investigation sample cases. The caseflow data reveal that the rates of suspect identification were by far the lowest in these two of all of the categories (15 percent in vandalism and 10 percent in unknown-motive fires). By contrast, the rates of suspect identification were extremely high in pyromania and spite cases (100 percent and 72 percent, respectively). This raises an important question: to what extent is motive determination driven by suspect identification? That is, there may be a tendency to consider arsons with no immediately identifiable suspect or motive to be the result of vandalism. By contrast, in order to attribute an arson to spite or pyromania, the investigator almost has to have a particular suspect in mind. As will be discussed in Chapter 4, many investigators do associate particular fire characteristics with particular motives, but these attributes are not so precise or clear-cut that their presence should eliminate other possible motives from consideration. It may be that some of the "vandalism" fires are in fact fraud arsons or the result of some other motivation, but the lack of witnesses and immediately available leads makes identification of another motive impossible.

3.2.2 Augmented Prosecution Sample Caseflow

This section presents the caseflow findings for our augmented prosecution sample. Because it is composed exclusively of cases accepted for prosecution, this sample is more useful than the investigation sample in analyzing the outcome patterns of cases between acceptance and final disposition. Further, since it represents the universe of disposed cases for a specific time interval, measurements based on this set of cases should be highly reliable.

Overall Prosecution Caseflow Findings

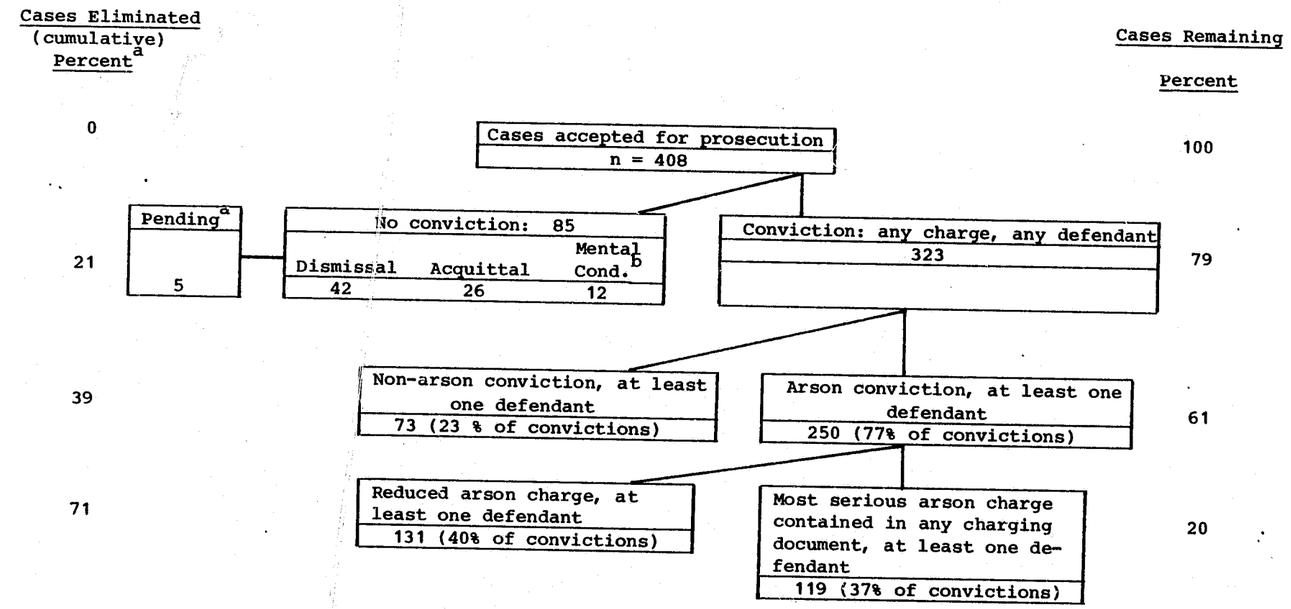
As described earlier, the augmented prosecution sample comprises approximately 100 recently disposed arson cases from each site. These 408 prosecuted cases involved a total of 471 defendants. Figure 3.3 depicts the overall caseflow for the augmented prosecution sample. Somewhat surprisingly (in view of the commonly voiced opinion that convictions are very difficult to obtain in arson cases), the most striking aspect of the prosecution caseflow is the extremely high conviction rate across all four jurisdictions. Seventy-nine percent of the sampled cases resulted in conviction of at least one defendant on some charge. Seventy-eight percent (367) of all defendants in the sample were convicted on some charge.[1] The augmented prosecution sample convicton rates were similarly high in all four study jurisdictions (ranging from 74 percent to 83 percent.)

There is substantial ongoing debate in the criminal justice literature as to the measurement of case "attrition" and the meaning of statistics such as conviction rates depending on the measurement base employed. It is strongly urged by Floyd Feeney and others that conviction rates measured, as they were in this study's augmented prosecution sample, from case filing are largely a reflection of prosecutorial screening policies. Simply put, strict screening results in high conviction rates while more lenient screening produces lower conviction rates. Calculation of conviction rates based on arrests, this

[1] These and all percentages reported subsequently in this section are based on total samples. As shown in Figure 3.3, the augmented prosecution sample includes five pending cases and ten pending defendants. If we exclude these from calculation of the conviction rates, the rates become 80 percent for both cases and defendants.

Figure 3.3

Augmented Prosecution Sample Caseflow Statistics:
Interim and Final Case Outcomes



[a] These pending cases are prosecuted cases from the randomly-selected investigation sample. These had to be included in the data base even if the defendants' cases had not been disposed.

[b] This includes 10 cases in which the defendant was adjudged incompetent to stand trial, one case in which the defendant was deemed not responsible due to "mental defect" and the indictment was set aside, and one case which was dismissed on condition that the defendant receive mental treatment.

argument goes, provides a more accurate picture of case attrition and eliminates the confounding effect of prosecutorial screening.[1] Our investigation sample caseflow analysis shows the extremely high rates of arson case drop-out during the investigation phase. Indeed, because so much drop-out occurred in this sample of cases before cases were even presented for prosecution, conviction rates calculated from case presentations in this sample (the closest we can come to arrests) must rely on very small numbers: 17 convictions of 37 adult presentations or 46 percent (see Figure 3.2 above). This is substantially lower than the conviction rate based on the augmented prosecution sample, reflecting not only attrition from prosecutorial rejection of cases but also a lower rate of convictions in cases accepted for prosecution. However, what is particularly interesting in our augmented prosecution sample caseflow is the very similarly high conviction rates based on case filings across all sites, despite what appear to be substantial differences in the stringency of prosecutorial screening across the sites. (These differences are discussed in Chapter 5.)

Table 3.9 shows the breakdown of disposition methods for the 471 defendants in the augmented prosecution sample. Disposition was by trial in only 14 percent of the cases, while 70 percent of the defendants' cases were disposed through pleas and 12 percent through dismissals. There were some variations in the trial rates across sites and these were largely the result of differences in prosecutors' policies regarding plea negotiations and dismissals. These policy differences are discussed later in this section.

Table 3.10 shows the outcomes of defendants' cases reaching a verdict after trial. The trial conviction rate (58 percent) was much lower than the overall conviction rate (78 percent). Prosecutorial policies regarding screening, dismissal, and trial are commonly believed to influence trial conviction rates. Stringent screening, high rates of pre-trial dismissals, and low trial rates are all generally linked to high trial conviction rates, while lenient screening, low rates of pre-trial dismissal (indicating a willingness to take weak cases to trial) and high trial rates are all often associated with lower trial conviction rates. However, as will be discussed

[1] Floyd Feeney et al., Arrests Without Conviction: How Often They Occur and Why--Final Report (Washington, DC: U.S. Department of Justice, National Institute of Justice, 1982), pp. 22-23.

Table 3.9

Method of Disposition, Augmented Prosecution Sample Defendants

Method of Disposition	Number of Defendants	Percent
Bench Trial	16	4
Jury Trial	49	10
Plea[a]	329	70
Dismissal[b]	55	12
Incompetent to Stand Trial[c]	12	2
Pending[d]	10	2
Total	471	100

[a] Includes deferred judgments (n=30) and deferred prosecutions (n=6). These arrangements, practiced primarily in Denver, essentially represent informal probation. In deferred judgments, a defendant enters a guilty plea in return for a period of informal probation with conditions. If the defendant stays out of trouble during this period, the record of the offense and "conviction" are expunged. Deferred prosecution is similar except that no plea is entered and no record of "conviction" ever made. This may be a disadvantage to the prosecutor if the defendant violates the conditions of probation. In that event, the prosecutor must win a conviction in order to have sentence imposed. By this time, witnesses and other evidence may have disappeared and it may be more difficult to establish the facts of the case.

[b] Includes dismissals by prosecutor and court (directed verdicts).

[c] Also includes one case in which the defendant was deemed not responsible by reason of mental defect--indictment set aside--and one case which was dismissed on condition that the defendant receive mental treatment.

[d] Defendants from investigation sample cases or in multiple defendant cases. (For purposes of this study, the definition of "disposed" was that at least one defendant be disposed, excluding sentencing and appeal.)

Table 3.10

Outcomes of Defendants Going to Trial, Augmented Prosecution Sample

Outcome	Jury Trials n	Jury Trials Percent	Bench Trials n	Bench Trials Percent	All Trials n	All Trials Percent
Guilty-Non Arson Charges	3	6	4	25	7	11
Guilty-Reduced Arson	2	4	0	0	2	3
Guilty-Most Serious Arson Charge Alleged	25	51	4	25	29	45
SUB-TOTAL: Convictions	30	61	8	50	38	58
Not Guilty-All Charges-Insanity	2	4	5	31	7	11
Not Guilty-All Charges-No Insanity	17	35	3	19	20	31
TOTAL	49	100	16	100	65	100

later in this section and in Chapter 6, the cross-site policy variations observed do not produce the expected variation in trial rates. As will be discussed in greater detail below, we conclude that this pattern confirms the common opinion about the relative difficulty of obtaining convictions in arson cases, at least as it pertains to arson cases reaching trial.

Arson convictions were obtained in 61 percent of all the cases in the augmented prosecution sample (77 percent of the convictions). However, only 37 percent of the convictions were on the most serious arson charge alleged, while 40 percent were on reduced arson charges and 23 percent were on non-arson charges. These figures, together with the high incidence of dispositions by plea, suggest that plea negotiations and charge reductions are extremely common in arson prosecutions, as they are in virtually all felony cases. Fifty-two percent of the defendants' cases revealed evidence of plea negotiations (65 percent of the cases resulting in some conviction). Plea negotiations are often difficult to discern from file information, but several of the sites explicitly noted plea offers and their details on the case jacket.

In almost half of the defendants' cases resulting in some conviction, the arson charge was either dropped (12 percent) or reduced (36 percent) between the final charging document (indictment or information) and the disposition. Charge reduction was considered to include both reducing the degree of the charge and dropping a count of the same degree. In 20 percent of the cases resulting in conviction, a felony charge was reduced to a misdemeanor.

Of the 358 convicted defendants with known sentences, 53 percent received prison sentences with an average term of 23 months (the range was one month to 16 years), 10 percent received only suspended sentences, 18 percent received only probation, and 19 percent received other sentences such as fines and requirements to make restitution or perform community service.

Variations Across Sites

As noted above, the overall conviction rates (any conviction, any defendant) from the augmented prosecution sample were uniformly high across all four study jurisdictions. However, there were some differences in the rates of arson conviction and conviction on the most serious arson charge alleged. Table 3.11 displays key prosecution sample caseflow statistics by site. Rates of defendants convicted on an arson charge ranged from 44 percent in the Bronx to 73 percent in Cleveland. This discrepancy may result from differences in statutes and policies concerning charge reductions. In Ohio, there are few non-arson charges appropriate for charge reductions in arson cases. Moreover, the prosecutor's office in Cleveland has a fairly restrictive policy on plea negotiations and charge reductions. According to the first assistant prosecuting attorney, the office "never" offers a plea bargain, although it may make a counter-offer to a defense proposal. Generally, there are no charge reductions for repeat offenders, and misdemeanor pleas are rarely accepted to felony indictments. No assistant is permitted to take a plea other than to the total indictment without the approval of the prosecuting attorney, the first assistant, or one of the three supervising assistants in the criminal division. Although it may be attributable in part to a lack of documentation, we found evidence of plea negotiations in only two percent of the Cleveland defendants' cases, in marked contrast to the frequency of documented plea negotiations in the other three sites (60 percent to 74 percent). Moreover, only four percent of the Cleveland defendants' cases were reduced from felonies to misdemeanors; the rates were 20 percent to 32 percent in the other three sites.

The rate of disposition by plea in Cleveland was 67 percent, which is similar to the rates observed in the other three sites (67 percent to 74 percent). The discrepancy between plea rate and plea negotiation rate is at least partially explained by the frequency of guilty pleas to the most serious arson charge alleged (39 percent of pleas). Cleveland did have the highest rate of conviction on the most serious arson charge alleged (44 percent of all defendants). On the other hand, there is evidence of arson charge reductions in Cleveland: 45 percent of the pleas were to reduced arson charges.

Table 3.11

Augmented Prosecution Sample Caseflow, by Site[a]

Site	n Cases	Percent Any Conviction	Percent Arson Conviction	Percent Conviction on Most Serious Arson Charge Alleged
Bronx	104	81	43	16
Denver	101	73	60	34
San Diego	100	80	69	24
Cleveland	107	83	73	43

[a]All percentages are based on total sample from the site.

The relatively low rate of arson conviction in the Bronx stems in large measure from the reduction of arson charges to reckless endangerment, which can be a felony or a misdemeanor. Thus, major attrition occurred from "any conviction" to "arson conviction." In addition, 63 percent of the cases resulting in arson conviction were reduced to a lesser degree of arson. In San Diego, 65 percent of the arson convictions involved reductions from the most serious arson charge alleged in the case; in Denver, the reduction rate was 43 percent.

The trial rate was higher in the Bronx (21 percent of all defendants) than in the other sites (Cleveland-16 percent, San Diego-12 percent, Denver-6 percent). This order is reversed in rates of case dismissals: Denver had the highest (20 percent), followed by Cleveland (11 percent), San Diego (11 percent), and the Bronx (7 percent). The contrast between the Bronx and Denver is explained by differing policies and practices on prosecutorial screening and dismissal of cases. In the Bronx, pre-screening of arrests reduces the number of cases accepted for prosecution in the first place; however, once cases are accepted, they are rarely dismissed. The office's policy is to take cases to trial. On the other hand, while the Denver District Attorney's Office rejects a substantial percentage of the cases presented, the number presented is somewhat larger than in the Bronx and thus, in absolute terms, more cases are accepted. As will be discussed in Chapter 5, screening decisions tend to be somewhat inconsistent in Denver; one result of this is that a number of weak cases are accepted for prosecution and later dismissed.

As noted above, conviction rates after trial were lower than the overall conviction rate. This appears to be particularly true in the Bronx, Denver, and San Diego, where there was a marked contrast between trial conviction rates and overall conviction rates (Bronx, 56 percent versus 81 percent; Denver, 50 percent versus 73 percent; and San Diego, 42 percent versus 80 percent). In Cleveland, by contrast, the trial conviction rate (75 percent) and overall conviction rate (83 percent) were very similar. In several instances, these figures seem to controvert the commonly perceived relationships among prosecutorial policies, trial rates, and trial conviction rates. As noted above, the trial rate in the Bronx was the highest among the four sites, largely because of the District Attorney's policy against pre-trial

dismissal. However, the trial conviction rate in the Bronx was 56 percent, substantially lower than the overall conviction rate but still the second highest among the sites. By contrast, Denver's high dismissal rate and low trial rate did not produce a higher trial conviction rate (50 percent). As will be discussed in detail in Chapter 5, San Diego revealed perhaps the most stringent prosecutorial case screening among the study sites, yet it also displayed the lowest trial conviction rate (42 percent). The Cleveland pattern is even more puzzling. As will be demonstrated in Chapter 5, the most lenient prosecutorial screening was found in Cleveland, but this site also produced the highest overall conviction rates and trial conviction rates in the study. The Cleveland figures may result simply from extremely effective prosecution or some aspects of "local legal culture," such as greater ease of obtaining jury convictions. However, we believe that the substantial discrepancy between trial conviction rates and overall conviction rates in the other three sites cannot be explained by policy differences but rather reflects the fact that arson cases are particularly difficult to win at trial. The most powerful substantiation for this finding is that studies of other felonies have not uncovered such discrepancies. (This evidence is presented in Section 3.3.4, below).

Sentencing patterns differed among sites, as shown in Table 3.12. The most striking variations occur in the percentages of convicted defendants sentenced to jail or prison terms. Only about one-fourth of convicted defendants in Denver received jail/prison sentences, while almost half received "other" types of sentences--largely deferred judgments. This is an arrangement in which the defendant enters a guilty plea in return for a period of informal probation with conditions. If the defendant stays out of trouble during the period of deferred judgment, the record of the offense and the "conviction" is expunged.

At the other end of the spectrum, almost 80 percent of the convicted defendants in San Diego received jail or prison sentences. In the Bronx and San Diego, probation was the most common alternative to prison, while in Cleveland, suspended sentences were more commonly used.

San Diego's convicted defendants received jail or prison sentences more often than defendants from the other sites, but the average term imposed

Table 3.12

Sentencing Patterns, by Site[a]

Percent of Convicted Defendants

	Bronx (n=92)	Denver (n=77)	San Diego (n=94)	Cleveland (n=95)
Jail/Prison Sentence	49	26	79	53
Suspended Sentence Only	1	9	6	23
Probation Only	33	17	12	11
Other Sentence (including restitution)	17	48	3	13
Total	100	100	100	100

[a]In the cases of nine defendants, sentences were unknown or not yet imposed.

in San Diego was shorter--14 months. Average jail/prison terms in the Bronx, Denver and Cleveland were 21 months, 30 months, and 35 months, respectively.

Variations Across Motives

There were some variations in prosecution caseflow across arson motive categories. Table 3.13 presents the caseflow by motive. As noted in Section 3.1, spite cases constitute the largest single motive category in the augmented prosecution sample, whereas they constituted only a minority of the randomly selected investigation sample. This suggests that spite cases are easier to move from investigation to prosecution than cases in other motive categories, notably vandalism and fraud. Not unexpectedly, an above-average percentage of spite cases resulted in some conviction (82 percent for spite cases, 79 percent for all cases). The conviction rate for spite cases was very high in San Diego (85 percent), Cleveland (88 percent), and the Bronx (87 percent), but somewhat lower in Denver (69 percent). In fact, it is this lower conviction rate for spite cases that brought Denver's overall prosecution sample conviction rate below the average across the four sites (73 percent in Denver, 79 percent in all sites).

As noted above, vandalism cases appear to be difficult to move from investigation to prosecution. However, once accepted for prosecution, vandalism cases exhibit the highest overall conviction rate of all motive categories, with very high rates in all four sites (the range is from 75 percent in the Bronx to 100 percent in Denver). Fraud cases also reveal uniformly high rates of conviction (from 76 percent in the Bronx to 100 percent in San Diego), although the numbers are quite small. Indeed, there were no fraud cases in the prosecution sample for Denver.

Of the major motive categories, the lowest conviction rate occurred in pyromania cases (73 percent). This appears to result from the frequent use of alternative dispositions (technically considered non-convictions), such as hospitalization and counselling, in cases involving mental disorders. Verdicts of not guilty by reason of insanity and findings that the defendant is incompetent to stand trial also contributed to this lower conviction rate for pyromania cases.

Convictions in fraud cases tend to be arson convictions (76 percent of the total fraud cases, 93 percent of the fraud convictions) and, more often than with other motives, convictions on the most serious arson charge alleged (41 percent of the total, 50 percent of the fraud convictions). In pyromania cases, the alternative dispositions tend to fall out as non-

Table 3.13

Augmented Prosecution Sample Caseflow by Arson Motive[a]

Motive	Number of Cases	Percent Any Conviction	Percent Arson Conviction	Percent Conviction on Most Serious Arson Charge Alleged
Fraud	37	81	76	40
Pyromania	77	73	66	26
Spite	204	82	60	28
Vandalism	37	86	62	38
Other	24	83	54	29
Unknown	29	62	41	21

[a]All percentages are based on total sample in motive category.

convictions; 91 percent of convictions are convictions on arson charges. However, a rather substantial number of pyromania arson convictions are also reduced from the most serious arson charge alleged (61 percent of arson convictions). Conviction on reduced arson charges is particularly common in pyromania cases in the Bronx, with no such cases resulting in conviction on the most serious arson charge.

Spite and vandalism convictions exhibit similar patterns: relatively high rates of arson convictions (74 percent of convictions in spite cases, 72 percentin vandalism) with about one-third to one-half of those reduced to lesser arson charges (54 percent of arson convictions in spite, 39 percent in vandalism).

Despite the higher rates discovered in fraud cases of arson convictions and convictions on the most serious arson charge alleged, sentences do not appear to be more severe in fraud cases than in other types of arson cases. Indeed, the rates at which convicted defendants were sentenced to prison were remarkably consistent across the four major motive categories (51 percent to 67 percent), as were the average prison terms imposed (18 months to 24 months).

3.3 Comparative Caseflow: Arson and Other Felonies

Information on arson adjudication is more meaningful if it can be compared to what is known of other offenses processed by the criminal justice system. Do police arrest as many suspects in arson cases as in other cases? Are prosecutors more or less successful with arson cases than with other felony cases? To answer these questions, data from other sources were compared with the study's sample data. We focused primarily on the arrest and prosecution stages, because the other stages--identification of suspects, presentation of the case to the prosecutor, indictment, and arraignment--take many forms according to jurisdiction and offense. Certainly, there is attrition during these stages, but the wide variations in practices and the limitations on available data make meaningful comparisons virtually impossible.

The nature of arson itself complicates the comparisons that might be made with other felonies. The motive for arson may be personal and irrational, as with pyromania, spite, or revenge. In such cases, arson appears to resemble crimes of non-instrumental violence such as assault. When arson is the act of vandals, it tends to resemble other acts of vandalism that do not involve burning. And when arson is committed to defraud insurance companies,

it resembles other types of fraud and economic crime. Vandalism not involving arson is ordinarily a misdemeanor and thus not readily comparable in terms of felony case processing. For these reasons, it appears that property crimes and assaultive crimes are the most relevant offenses on which to base comparisons with arson dispositions.

In this section we examine the available data for comparing caseflow in arson and other felonies at the following stages of processing: arrest, prosecutorial screening, disposition, and method of disposition.

3.3.1 Arrest Rates Compared to Arson Case Presentation Rates

As discussed in Section 3.2.1, the case sampling and data collection for this study tracked arson incidents rather than arrests; thus, the data set does not reflect rates of arson case clearance by arrest. However, as noted, the rates of case presentation from the investigation sample appear to be quite similar to UCR figures on arson arrest rates. Table 3.14 compares arson case presentation rates from the present study to UCR 1981 arrest rates for other felony categories, in cities with populations of at least 250,000. These statistics demonstrate that, although arson can be a crime of assault, violence, and death, cases of arson are cleared by arrest at a far lower rate than are other crimes of violence. Clearance rates for arson are much closer to those for property crimes such as burglary, motor vehicle theft, and larceny-theft. It seems quite clear that the reason for this difference lies in the character and quality of the testimonial evidence available. Crimes of violence, by definition, involve direct, person-to-person incidents. Arson, like the other property crimes, usually does not involve direct personal confrontation--with the exception of some spite arson cases. Most arsonists, particularly those with fraud motives, wish to avoid being seen by anyone. Some mentally disordered arsonists do wish notoriety and thus try to arrange to be seen. Overall, however, direct testimonial evidence linking the perpetrator to the crime is much rarer in cases of arson and other property crimes than it is in cases of violent crimes against persons. As a result, it is much more difficult to identify the suspect and make the arrest. As will be discussed below, however, once an arson case is developed and accepted for prosecution, it stands about the same chance of resulting in a conviction as does any other felony case. In short, as we have already noted, the major attrition of arson cases occurs in the investigation stage rather than during the actual prosecution of the case.

Table 3.14

UCR 1981 Arrest Rates for Selected Index Crimes Compared to Abt Associates' Arson Case Presentation Rates

Crime Category	UCR: 1981 Arrest Clearance Rate: Cities 250,000+	Abt Associates' Data: Rate of Arson Case Presentation
Arson	10.7	10.8[a]
Aggravated Assault	54.2	
Burglary	11.9	--
Larceny-Theft	17.5	--
Motor Vehicle Theft	8.6	--
Violent Crime[b]	34.9	--
Property Crime[c]	14.5	--
Crime Index Total	15.7	--

[a] Based on randomly selected investigation sample, all sites (n=400).

[b] Murder, forcible rape, robbery, and aggravated assault.

[c] Burglary, larceny-theft, and motor vehicle theft; arson is excluded.

SOURCE: FBI, Crime in the United States, 1981, Table 19, p. 153, and Abt Associates' sample data.

3.3.2 Prosecutorial Screening

Available data on the rates at which prosecutors reject cases at screening reveal extremely wide variation across jurisdictions. One multi-jurisdictional study reported felony rejection rates of eight percent to 36 percent.[1] Another study presented estimates by prosecutors in seven jurisdictions of their case rejection rates: the range was five percent to 80 percent, with the bulk lying between five percent and 30 percent.[2]

Comparison of rejection rates within crime types also suggests wide variation across jurisdictions. The multi-jurisdictional study cited above reports rejection rates in assault cases varying from zero to 68 percent and in burglary cases from zero to 47 percent. Wide variation was noted across that study's sites in rejection rates for all UCR Part I crimes.[3] Although the numbers are quite small, our investigation sample caseflow data also reveal wide variation in arson case rejection rates, but with very low rejection rates clearly predominating. (The Bronx, San Diego, and Cleveland had very low rejection rates, while Denver's rate was 47 percent.)

Because of the cross-jurisdictional variation in both our caseflow data and the available secondary data, it appears that the most instructive comparisons would be between case rejection rates for arson and other crimes within the same jurisdiction. We can draw such comparisons in two of our sites: San Diego and Denver. In San Diego, the arson rejection rate appears to be quite small, but perhaps slightly higher than the rejection rate for all felonies (0.7 percent).[4] Although no adult arson cases in

---

[1] Kathleen B. Brosi, A Cross-City Comparison of Felony Case Processing (Washington, DC: U.S. Department of Justice, Law Enforcement Assistance Administration, April 1979), Figure 4, p. 12.

[2] William F. McDonald, Henry H. Rossman, and James A. Cramer, Police-Prosecutor Relations in the United States: Final Report (Report submitted to U.S. Department of Justice, National Institute of Law Enforcement and Criminal Justice, 1980), Part III, Chapter 3, Table 7, p. 43. Another recent study found an extremely wide range of rejection rates (2 percent to 80 percent). See Joan Jacoby et al., Policy and Prosecution (U.S. Department of Justice, National Institute of Justice, January 1982), Figure 5, p. 27.

[3] Brosi, Felony Case Processing, pp. 114, 123, 131, 139, 148, 156, 164.

[4] Data provided by San Diego County District Attorney's Office from the JURIS Management Information System.

the investigation sample were rejected,[1] we know from our supplemental sample of rejections and from anecdotal evidence that some arson cases are rejected. Indeed, as discussed in Chapter 5, we found screening of arson cases to be more stringent in San Diego than in all of the other study sites.

As noted above, Denver's arson case rejection rate was 47 percent. This figure is slightly lower than the district attorney's overall rejection rate, which was 53 percent in 1980 and 54 percent in 1981.[2] Thus, based on these two sites, it appears that arson case rejection rates do not differ markedly from rejection rates for other cases, and certainly the variations are not as great as those between overall rejection rates across jurisdictions.

3.3.3 Case Dispositions

While surprisingly few data are available and cross-jurisdictional variations make comparisons somewhat perilous, it does appear that the 79 percent overall conviction rate in our augmented prosecution sample compares favorably with rates in other categories of felonies. A multi-jurisdictional study of felony case processing which used Prosecutors' Management Information System (PROMIS) data from the first six months of 1977 documents conviction rates (based on case filings) ranging from 41 percent to 78 percent.[3]

Moreover, the low conviction rates from our arson investigation sample may not be so different from conviction rates based on arrests (as opposed to filed cases) in other felony categories. The arson conviction rates based on presented cases from our investigation sample (range of 20 percent to 60 percent in the four sites) are similar to the felony conviction rates based on arrests discussed in the multi-jurisdictional study (21 percent to 62 percent).[4] While these figures may not be perfectly comparable, they suggest that significant case attrition occurs during the investigation and pre-filing stages in all types of felony cases. Investigations of

---

[1] Within sampling error, the true rate could be up to about 3.5 percent.

[2] Data provided by Denver District Attorney's Office.

[3] Brosi, Felony Case Processing, pp. 8-9.

[4] Ibid., p. 10.

most of the other property crimes encounter the same barrier faced in arson investigations: the frequent difficulty of identifying a suspect.

In order to make more precise comparisons between post-filing disposition rates in arson and similar cases, it is helpful to focus on a particular jurisdiction. We selected San Diego for this purpose because the San Diego County District Attorney's Office maintains a management information system permitting easy access to felony data. Tabulations of 1981 disposition data were obtained for a variety of property crimes, assault, arson, and all felonies aggregated. The figures are shown in Table 3.15, together with our San Diego augmented prosecution sample caseflow data. The most important conclusion to be drawn from the figures in Table 3.15 is that arson conviction rates in San Diego compare favorably with those for other felonies.

Comparison among felony categories regarding the charge on which a conviction was obtained is made more difficult by the absence of data in the prosecutor's information system on "other charge convictions." It seems evident that any other charges on which convictions were obtained have been subsumed under the "lesser charge" category. Assuming this is so, we can see that defendants in assault cases were convicted on the highest charge about half the time. In the property crimes, convictions on the highest charge were obtained less often--about 40 percent of the time on the average--and convictions on the highest arson charge were obtained still less often (in about 30 percent of the cases). The greater frequency of charge reductions in arson cases may result from the complex arson statute in California, which includes a range of charging and disposition options.

3.3.4 Methods of Case Disposition

The recent multi-jurisdictional study on felony case processing found that "trial is...the least common disposition of cases filed with the court." Overall trial rates for filed felony cases in the jurisdictions included in that study ranged from two percent to 21 percent. Trial rates were found to be somewhat higher in cases of homicide (30 percent to 45 percent), rape (24 percent to 44 percent), robbery (14 percent to 27 percent), and other violent crimes than in cases of property crime (e.g. burglary: 9 percent to 14 percent and larceny: 6 percent to 22 percent).[1]

---

[1] Brosi, Felony Case Processing, pp. 45-46.

Table 3.15

Comparative Felony Disposition Data - San Diego, 1981

	Assault[a]	Breaking and Entering	Larceny	Auto Theft	Property Crime[b]	All Felonies	Abt Assoc. Augmented Pros. Sample Cases, San Diego
TOTAL DISPOSITIONS	1191	2088	955	682	3675	9033	100
CONVICTION, ANY CHARGE	1009	1790	721	520	3031	7106	80[c]
Percent of total dispositions	84.7	85.7	79.7	76.2	82.5	78.7	80
Highest charge	517	773	268	198	1239	4700	24
Percent	51.2	43.2	37.2	38.1	40.9	66.1	30
Lesser charge[d]	486	1007	449	318	1774	2406	56
Percent	48.1	56.8	62.8	61.9	59.1	33.9	70

[a] There is a discrepancy in the data furnished by San Diego County: the assault convictions on highest charge and lesser charge do not add to the total assault convictions. As a result, the percentages do not add to 100.

[b] "Property crime" is a constructed category comprising Breaking and Entering, Larceny, and Auto Theft.

[c] This is the basic case conviction rate: any charge, any defendant.

[d] This figure combines the "other" and "lesser" charge categories.

SOURCE: Data from JURIS system, San Diego County District Attorney's Office and Abt Associates sample data.

Abt Associates' augmented prosecution sample caseflow data reveal that dismissal, rather than trial, is the rarest disposition method (12 percent of defendants). The arson trial rate--14 percent--is comparable to the rates for cases of property crimes--and smaller than those for cases of violent crimes--as measured in the multi-jurisdictional study. However, San Diego data suggest that the trial rates in arson cases may be higher than the aggregate rate for all felonies. The augmented prosecution sample caseflow data show a trial rate of 14 percent for San Diego, while the district attorney's statistics for 1981 arson cases reveal a trial rate of nine percent. (The discrepancy results from the fact that our sample covered a longer period than calendar year 1981.) The aggregate felony trial rate for San Diego in 1981 was only four percent.[1]

As reported above, three of the four sites in the present study revealed trial conviction rates substantially lower than overall conviction rates. We have interpreted this to mean that convictions are particularly difficult to obtain in arson cases reaching trial. Critical support for this finding comes from the fact that similar discrepancies were not found in studies of other types of cases or aggregate studies of all prosecutions. In San Diego, trial conviction rates for total felonies are at similar high levels to overall conviction rates for total felonies.[2]

The multijurisdictional study cited above shows that trial conviction rates ranged from 50 percent to 93 percent, with the majority falling between 70 percent and 80 percent.[3] In the same 13 jurisdictions, the overall conviction rates ranged from 41 percent to 82 percent, with the majority falling between 60 percent and 70 percent. Indeed, in 9 of the 13 jurisdictions, the trial conviction rate was higher than the overall conviction rate.[4]

---

[1]Data from the JURIS system provided by the San Diego County District Attorney's Office.

[2]Data from the JURIS system, San Diego County; Feeney et al., Arrests Without Conviction, p. 85.

[3]Brosi, Felony Case Processing, Figure 3, p. 9.

[4]Trial conviction rates are probably similar to or higher than overall conviction rates because, as shown in a recent study, cases going to trial generally have stronger evidence than cases disposed by pleas. Joan E. Jacoby et al., Prosecutorial Decisionmaking: A National Study (Washington, D.C.: U.S. Department of Justice, National Institute of Justice, 1982), p. 40. However, as will be discussed in Chapter 6 of this report, arson cases going to trial tend to have weaker evidence than arson cases disposed by pleas; this helps to explain the discrepancy between trial conviction rates and overall conviction rates for arson cases.

Moreover, the cross-site variation in trial conviction rates did not appear to reflect simply variations in rates of cases reaching trial.[1] Statistics compiled by the Administrative Office of the United States Courts show that the overall conviction rate in cases disposed by all U.S. District Courts in the twelve-month periods ending June 30, 1976-June 30, 1980 ranged from 77.7 percent to 79.9 percent. The range of trial conviction rates in the same twelve-month periods was an almost identical 76.8 percent to 80.5 percent.[2] These data seem to support the conclusion that while overall conviction rates in arsons are similarly high to those in other felonies, it may be more difficult to obtain convictions after trial in arson cases than in other types of felony cases.

3.4 Summary

This chapter has described the cases in our investigation and augmented prosecution samples and presented the highlights of the caseflow analysis of these samples. Most of the sampled cases involved single fire incidents in structures. The structures involved were most often residential and in use (includes buildings in use but unoccupied at the time of the fire) as opposed to vacant. The cases resulted in relatively few deaths and injuries and relatively low dollar-loss (the median was $500). Dollar-loss was much higher in fraud cases than in the rest of the sample. Vandalism and unknown-motive arsons were predominant in the randomly selected investigation sample, while spite cases contributed fully half of the prosecution sample and pyromania cases increased their share from the investigation to the prosecution sample. Fraud cases constituted smaller but roughly equal percentages in the two samples. This suggests that vandalism and fraud cases are more difficult to move from investigation to prosecution than are spite and pyromania cases.

The investigation sample caseflow revealed a very low conviction rate (4 percent) as a proportion of the total sample of cases. The major attrition occurred through lack of identified suspects (71 percent of all cases) and

---

[1]Brosi, Felony Case Processing, Figure 3, p. 9.

[2]Administrative Office of the United States Courts, Sixth Report on the Implementation of Title I of the Speedy Trial Act of 1974 (Washington, DC, 1980), Table 17, p. 30.

non-presentation of cases for prosecutorial screening (60 percent of cases with suspects). Once cases were presented for prosecution, acceptance rates were very high (with the exception of Denver, where the rejection rate was 47 percent).

Although comparisons are difficult because of problems of data availability, measurement and presentation, it appears that incident-based conviction rates may not be appreciably lower for arson than for property crimes like burglary, larceny, and auto theft. Analysis of the augmented prosecution sample (composed exclusively of accepted cases) revealed a basic conviction rate, 79 percent, as high or higher than those found for other felonies. This is surprising, in light of the widely publicized view that arson cases are particularly difficult to prosecute. As with other felony cases, dispositions by plea negotiation and associated charge reductions were common. Indeed, charge reductions may be more common in arson cases than in other types of felonies, although this may result more from the structure of arson and related statutes rather than from case characteristics or prosecutorial practices.

Trial rates in arson cases appear to be similar to those for other property crimes but lower than for violent crimes like homicide, rape, and robbery. However, data from San Diego suggest that arson trial rates may be higher than overall felony trial rates. In all of the sites except Cleveland, conviction rates for cases reaching trial were substantially lower than the overall conviction rates. Moreover, there do not appear to be similar discrepancies between trial conviction rates and overall conviction rates in other types of felony cases. Thus, it may be that it <u>is</u> more difficult to win convictions in arson trials than it is n other felony trials.

Nevertheless, the most important conclusions to be drawn from this caseflow analysis are two: that the most significant drop-out of arson cases occurs at the investigation stage, and that once cases are accepted for prosecution, conviction rates are surprisingly high. In the following chapters, we elaborate and explain the caseflow findings from the four study jurisdictions. The chapters are arranged according to the sequence of case processing: we begin with the investigation process and the decision to present (Chapter 4), then turn to prosecutorial screening (Chapter 5), and conclude with an analysis of the outcomes of cases accepted for prosecution (Chapter 6).

4.0 THE INVESTIGATIVE PROCESS: GETTING CASES TO PROSECUTION

The possibility that an arson will result in charges being filed and that those charges will result in a conviction is very remote at the beginning of an investigation. As pointed out in the preceding chapter, most arson cases are never solved; a suspect is never identified in most arson cases and even if a suspect is identified, there may not be enough evidence to make an arrest. Named suspects were identified in only 29 percent of the cases in this study's investigation sample,[1] and only 37 percent of these were presented to the prosecutor. Thus, 71 percent of the cases never progressed to the point where a named individual became the focus of investigators' suspicions. The likelihood of conviction is even more remote: only four percent of the 400 randomly sampled investigations resulted in an adult conviction of <u>any</u> defendant on <u>any</u> charge.

These figures strikingly illustrate the importance of the investigative stage in the arson adjudication process. A successful investigation does not ensure that the rest of the process will go smoothly, since a case still must pass through prosecutorial screening (discussed in Chapter 5) and be put to the test of "reasonable doubt" before a conviction can be returned (as discussed in Chapter 6). Nevertheless, the critical nature of the investigation cannot be ignored. One prosecutor we interviewed suggested that "cases are won or lost before they reach [the prosecutor]."

Since so many arson cases fall out during the investigative stage, it is helpful to examine this process in detail to determine where the weaknesses lie and what strategies might result in more arson prosecutions. In Section 4.1 we discuss three key components of an arson case: evidence on the incendiary origin of the fire, evidence on motive; and the identification of a suspect and the linkage of that suspect to the crime.

The major findings of this section are the following:

- <u>Although the strength of the evidence on incendiary origin can cause serious problems at the prosecution stage, it appears to receive little attention after the very initial stage of the arson investigation</u>.

[1] In 12 cases, the suspect was a juvenile. Although for other purposes in this report we have excluded juvenile cases from analysis, they are retained in the analysis of identification of suspects, since the procedures used and evidence needed to identify a suspect are applicable to both juvenile and adult cases. In the analysis of the decision to present cases for prosecution (in Section 4.2.3) the juvenile cases are excluded.

- Our data show a surprisingly low level of reliance on laboratory analysis of fire debris in the establishment of incendiary origin. However, we believe that samples of fire debris should be collected and analyzed in as many cases as possible. This can assist the prosecution in several ways, depending on the theory of incendiary origin being presented in the particular case. At the same time, undue emphasis should not be placed on the acquisition of sophisticated and costly laboratory equipment as a panacea for the problem of establishing incendiary origin. Careful and thorough scene examination reports, effective expert testimony, convincing laboratory analysis, and generally logical and intelligible court presentations (utilizing diagrams, photographs, or even videotapes) are all essential to proving this crucial first element of an arson case.

- The motive for arson receives significant investigative attention although it is often very difficult to determine, and fires are sometimes prematurely attributed to a certain motive category without sufficient consideration of other possibilities (e.g., vacant building fires assumed to be the result of juvenile vandalism without investigation of possible fraud motive).

- The most critical and difficult aspects of arson investigation are identifying a suspect and linking the suspect to the fire. (Apprehension of a suspect occurs in most solved cases within 24 hours of the fire. Few cases that remain unsolved after 24 hours are ever solved.) The difficulties of this stage of the investigation are attributable to the following factors:

  --modus operandi: arsonists usually act surreptitiously; some arsonists are not even physically at the scene at the time the fire starts; others can claim to have been legitimately and innocently at the scene.

  --motive: suspects are easier to identify in spite-and-revenge arsons than in vandalism and fraud arsons. In pyromania cases, it is difficult to attribute motive without having a suspect in mind.

  --witnesses: eyewitnesses are rare in arson cases; much more common are witnesses as to opportunity; the strength of such evidence depends largely on how close in time and place it can link the suspect to the fire.

  --type of property burned: suspects are much more commonly identified in arsons of buildings with persons present at the time of the fire than in vacant or unoccupied buildings.

- In building all elements of an arson case, investigators should constantly examine the evidence as to its

potential persuasiveness in court, and not simply as to its sufficiency for continuing the investigation or presenting the case to the prosecutor.

Section 4.2 discusses the major aspects of arson investigative case management: selection of cases for follow-up investigation; follow-up on suspects and leads; disposition of arson investigations--termination without results and presentation to the prosecutor; and prosecutor involvement in investigations. The major findings of this section are as follows:

- Selection of cases for follow-up is strongly influenced by caseload pressures and decisions regarding allocation of limited resources. Investigative resources do not seem to be wasted on cases with little likelihood of solution. On the other hand, follow-up is largely limited to cases with immediately available suspects, leads, or informant information; as a result, some potentially promising cases may be bypassed or overlooked if their possibilities are not immediately apparent. This may be particularly true of arson-for-profit cases, which generally take more time and resources to develop.

- Because of public pressure, fire seriousness also affects follow-up decisions, but fire seriousness does not significantly increase the likelihood of suspect identification.

- In a surprising number of cases (15 percent of cases not presented for prosecution), investigators failed to follow-up on tangible leads or named suspects. This problem, which also results in part from caseload pressures, should be addressed by instituting regular and systematic review of all active case files.

- The investigator's decision to terminate a case without results or present it to the prosecutor seems strongly influenced by the presence or absence of evidence directly linking the suspect to the fire. At the same time, many cases with linkage evidence and/or combinations of circumstantial evidence are never presented, suggesting that investigative "pre-screening" may sometimes be too conservative. Investigators should be more venturesome in presenting cases to the prosecutor, both formally and informally.

- Complete, clear, and logical documentation of case development in investigation reports is essential to effective investigative case management and rational prosecutorial screening decisions. Investigators should receive additional training and guidance on report preparation and the information needs of prosecutors.

- Prosecutor involvement in investigations is rare, despite the literature's virtually unanimous call for such activity. Our interview data suggest that the prosecutor's role in investigations should remain largely advisory and consultative rather than directive. However, an aggressive approach by prosecutors may be useful in expanding arson-for-profit investigations when a torch can be used to implicate the property owner. A special arson prosecutor may also help to monitor ongoing investigations so that suspects or leads do not "fall through the cracks;"

Finally, in Section 4.3, we examine the relative effectiveness of various models of organization for arson investigation units. The major findings are as follows:

- Organizational factors are by no means the only influences on investigative performance. However, it appears that divided responsibility models of arson investigation involving both police and fire units are more prone to "turf" struggles and communications breakdowns than are team approaches or units staffed by one department. Thus, we are inclined to recommend the latter two approaches over the former.

4.1 Problems in Moving Cases from Investigation to Prosecution

4.1.1 Establishing Incendiary Origin

Investigating an arson case requires an extra step that is unnecessary in many other criminal investigations: determining whether a crime has actually been committed. Individuals who have property stolen or are assaulted usually know that a crime has occurred. Arson investigations, by contrast, are rarely initiated as a result of a citizen's complaint; instead, the starting point is generally the fire scene itself, which must be studied for clues as to cause and origin.

While we will not dwell upon the technical aspects of fire cause and origin determination (a complicated subject about which much has been written), it is appropriate to note that proving an arson is made more difficult by the fact that the burned property is simultaneously the scene of a crime, the direct victim, and the corpus delicti. A suspicious fire may be likened to a death where homicide is one of several possibilities and it is the responsibility of the coroner to uncover what took place. Arson may pose even

greater difficulties than homicide, however, since the materials which may cause an accidental fire (e.g. kerosene, cleaning solvents) might be stored routinely at the scene of the fire and are thus not in themselves cause for suspicion. Conversely, the discernible trace elements of flammable liquids used to accelerate arson fires may closely resemble the burned residue of legitimately present materials--such as plastics and synthetic materials often used in the manufacture of furniture and carpeting.

This study's research design, under which only those fires already labelled incendiary in origin were sampled, prevents us from assessing the extent to which initial arson detection is a problem. Some arsons may go unrecognized at the earliest stage and therefore may never result in any investigation at all. Others may be investigated but incorrectly identified as accidental, or their cause may never be determined. Some arson unit supervisors believe that investigators should be required to "call" every fire as either accidental or incendiary and that there should be no intermediate categories (such as "suspicious") or fires carried as undetermined. Although these problems are not a central issue in this discussion, it is important to bear in mind that the arsons we are analyzing are those that did not fall out due to any errors of this type.

In making their assessment that a fire is arson, investigators in the study sites relied heavily on their own observations. There was expert testimony on fire cause and origin available in about half of the 400 randomly sampled investigations. As Table 4.1 shows, certain types of evidence suggesting arson clearly predominate among expert observations. Burn patterns and evidence of accelerants were each cited in more than one-quarter of the cases. On the other hand, there were only a small number of fires in which investigators found trailers (paths of paper, flammable liquid, or other material laid out to spread the fire and then consume themselves) or ignition devices. This finding may suggest a relative lack of sophistication of the arsonists in our sample. On the other hand, it may simply indicate the extreme difficulty of discovering traces of ignition devices when a fire has progressed beyond a certain point.

Interestingly, requests for laboratory analysis appeared in only seven percent of the 400 investigations.[1] Although file records may

[1] We do not report the results of the laboratory analysis since many of the files lacked these data.

Table 4.1

Expert Testimony on Incendiary Origin, Investigation Sample
(n=400 cases)

Type of Expert Testimony	Number of Cases	Percentage of Cases With Testimony Present
Any Expert Testimony on Incendiary Origin[a]	201	50
• Presence of Accelerants	109	27
• Burn Patterns	101	25
• Multiple Points of Origin	55	14
• Ignition Devices	17	4
• Trailers	6	2

[a]The following categories are the components of expert testimony. However, their frequencies and percentages do not add to the figures for any "expert evidence" because some cases had more than one type of expert testimony.

be incomplete on this point, this figure may also suggest that scientific analysis of fire debris is considered beneficial or cost-effective only in selected cases, with investigators relying most often on their own expert judgment.[1] One investigator interviewed suggested that the value of laboratory analysis lay in its confirmation of investigators' observations. Our finding that physical evidence is quite infrequently collected is corroborated by another study, which found that only 200 pieces of physical evidence were gathered in the course of 909 fire investigations.[2] The maximum possible rate of collection of such evidence is 22 percent of the cases if each piece of evidence came from a different case.

While physical evidence may currently be collected infrequently in arson cases and its value may be questioned by some observers,[3] investigators and prosecutors believe strongly in the importance of collecting physical evidence at every fire scene possible. They cite the importance of demonstrating in all cases that a complete crime scene investigation has been conducted. Moreover, it is important to have scientific evidence, such as laboratory analysis of fire debris, available to support any expert testimony on cause and origin of the fire. This obviously holds true for the most common situation in which the prosecutor is attempting to establish that an accelerant was used. However, laboratory analysis revealing no traces of flammable liquid can also be helpful if the prosecution is arguing that an arsonist used only available combustibles or if the fire was spread by legitimately present flammable liquids.

Another important part of the fire investigators' analysis of a fire scene is to determine whether the fire is attributable to any accidental cause. Standard investigative practice in most jurisdictions includes this component, but the thoroughness with which it is done varies so widely among the study sites that statistics would be misleading. For example, in some

---

[1]In this discussion, "expert testimony" means testimony by a trained arson investigator on one of the five issues listed in Table 4.1.

[2]International Association of Fire Chiefs and Ryland Research, Inc., "Managing Arson Control Systems: A Study of Arson and Anti-Arson Efforts in a Selected Sample of Jurisdictions" (Report submitted to U.S. Department of Justice, National Institute of Justice, 4 vols., April 1982), p. 3-54.

[3]Ibid., pp. 3-47 and 3-48.

units investigators simply state in their reports, without additional documentation, that there were no possible accidental causes for the fire. By contrast, other units routinely document in their reports factors which may effect the cause or behavior of a fire such as the following: the presence or absence of electric or gas service, the condition of appliances, wiring, outlets and fuses at or near the fire's point of origin, the presence or absence of indigenous flammable substances; the possibility of careless disposal of smoking materials, and the weather conditions at the time of the fire. Thus, while the possibility that a fire was accidental is considered and discussed in many investigations, the evidence leading to this conclusion is not always well documented.[1]

Nevertheless, the quantity and quality of evidence of incendiary origin do not seem to have an effect on the number of arsons reaching prosecution. Once a fire investigator has made a judgment that a fire was intentionally set, prosecutors and others involved in preparing the case seem reluctant to challenge or probe the basis for this finding. In one of the study sites in which fire and police personnel divide responsibility for arson investigation, the supervisor of the police unit stated that the quality of the scene examination in no way influenced his choice of cases for follow-up. He believed it was the fire department's responsibility to conduct an investigation of at least the minimum thoroughness needed to pass muster in court. More broadly, prosecutors in three of the four sites stated that their decisions to accept or pursue cases did not depend on the strength of the proof that a fire was the result of arson. They seemed content to rely on the expertise of investigators for this type of evidence.

Once the cause determination is made, prosecutors and investigators tend to treat it as a fait accompli rather than evaluating the evidence of incendiary origin for its potential persuasiveness in court. This raises an important general issue in arson investigation: the standards for evidentiary strength necessary to pursue an investigation (or clear a case) may be

[1] A major city arson unit supervisor notes that videotaping fire scenes is a useful strategy both as documentation for findings as to cause and origin and as ongoing training aids for investigators. This unit supervisor also noted that videotapes have revealed things overlooked by investigators during their scene examination.

less stringent than the requirements for an effective court presentation. This discrepancy can cause problems if the case reaches prosecution and trial. (The problems in establishing incendiary origin at trial are discussed in Chapter 6.) In general, investigators should assume in building each case that it will ultimately go to trial. Thus, they should evaluate all evidentiary elements for their persuasiveness in a court presentation.

Although the need to prove that a crime occurred and the difficulty of reconstructing events at a fire scene are often cited as major problems associated with arson investiation and prosecution,[1] our data suggest that this component of the investigative process is not causing many early case terminations.

4.1.2 Developing Evidence on Motive

It is paradoxical that establishment of incendiary origin--always a fundamental legal element of arson--does not seem to receive great attention after the very early stage of the typical investigation while evidence on motive--never a legal element of the crime--seems to play a far more important role with investigators and prosecutors alike. For investigators, information on possible motives may facilitate the difficult process of identifying suspects and linking them to the fire. Moreover, investigators feel they are able to present a stronger case to the prosecutor if they can explain the reasons underlying the suspect's behavior. From the prosecutor's point of view, motive evidence can be critical in convincing a jury to return a guilty verdict. Thus, as a practical matter, motive evidence is very important, although it is technically not required to prove an arson case under the law. At the same time, investigators should not give excessive attention to developing motive evidence in the absence of evidence linking the suspect to the commission of the arsson. In the absence of such linkage evidence, a case is rarely prosecutable even if there is strong evidence of both incendiary origin and motive.

[1] See, for example, John F. Boudreau et al., Arson and Arson Investigation: Survey and Assessment (Washington, D.C.: U.S. Department of Justice, National Institute of Law Enforcement and Criminal Justice, 1977), Chs. V-VI; Harvey M. French, The Anatomy of Arson (New York: Arco, 1979); International Association of Fire Chiefs, "Managing Arson Control Systems," Section 3.

Characteristics of the fire itself, its location and its timing often help investigators to focus on the likeliest motives. Although it is difficult to be certain of the motive in a case without an admission from the arsonist, investigators interviewed in the course of this study described several indicators associated in their minds with certain motives:

- Arson for profit. In deteriorated urban apartment buildings, fires to obtain insurance proceeds are often set in rear apartments on upper floors so as to delay detection and to destroy the roof, and maximize the water damage to lower floors. Arson in a commercial structure frequently coincides with a downward trend in the fortunes of the business. In one study jurisdiction, there have been a number of fraud fires in bars and restaurants in recent years--which has led investigators almost automatically to suspect fraud when faced with any fire in a bar or restaurant. The presence of accelerants and ignition devices also strongly suggests that fraud was the motive.
- Spite and revenge. Such fires are often set in bedrooms and involve the clothing of the intended victim. Other personal items such as photographs or mementos may also be set afire. In the Bronx, common practice is to set fire to the door of the victim's apartment. Frequently, there will be evidence that the suspect has recently threatened or quarreled with the victim.
- Vandalism. Often set in vacant buildings, vandalism fires typically do not involve the use of any flammable liquids. Instead, the arsonists use whatever combustibles are available on the premises--typically trash or scrap wood. Damage other than that caused by fire is also sometimes characteristic of this motive. The label "vandalism" is sometimes applied to vacant building fires which destroy walls so that pipes and plumbing fixtures can be stripped and sold.
- Pyromania. Most investigators suspect this motive only when they are faced with a series of apparently motiveless fires that have similarities in the type of property burned or in the method by which the fire is set.

Although investigators can describe from experience factors which tend to indicate a particular motive, these relationships have rarely been examined systematically. However, a recent study examined 138 randomly selected arson cases in New York City in which suspects had been arrested and motives determined. The study developed a profile of each motive category on

the basis of the following characteristics: location of the point of origin; material ignited; use of flammable liquid; number of points of origin; occupant's involvement in previous fires; presence of occupant at the time of fire; time of the fire; type of structure involved; and location of the fire's point of origin within the building.[1] Although several of the motive categories have many fire characteristics in common, the study found some dissimilarities as well. For instance, firesetters motivated by revenge, desire for welfare relocation, or insurance fraud often use accelerants, whereas other types of firesetters typically do not use accelerants. Firesetters hoping to be relocated by the welfare department differ from other firesetters in other ways as well: for example, they typically ignite multiple fires rather than a single fire. The author also found that vandals and pyromaniacs behaved in similar ways except for the fact that pyromaniacs almost never set fire to vacant buildings. This is, of course, very preliminary research based on fires in one city. Arson investigators in other cities may observe different patterns of characteristics. Indeed, the supervisor of one major arson unit noted that pyromaniacs in his city very commonly set fires in vacant buildings.

Although experienced investigators can sometimes make an educated guess about a motive based on factors such as those outlined above, many fires provide too little information to permit determination of the motive. Chapter 3 described the four principal motive categories used in classifying cases for this study. As Table 3.2 showed, we were unable to assign a motive in 39 percent of the 400 randomly sampled cases. In addition, there were several typical sets of circumstances in which multiple motives seemed possible. Investigators might determine that a tenant in an apartment had had a dispute with the landlord and had recently been evicted, thus suggesting the possibility of a spite and revenge motive. However, if witnesses also reported problems with juveniles in the area or in the building, the fire might just as easily be a vandalism arson. Similarly, a fire in the apartment of a tenant reporting prior threats from enemies might appear to be a spite fire, yet the tenant might be concealing the true motive of welfare fraud.

---

[1] Angelo Pisani, "Identifying Arson Motives," Fire and Arson Investigator, 21 (June 1982), pp. 18-24.

Another common scenario involves a series of fires in trash dumpsters which may be the work of a pyromaniac or juvenile vandals. A common concern is that investigators may fail to probe beyond an initial determination that a fire is the result of vandalism (e.g. a rundown, partially vacant structure with evidence of previous juvenile activity) to examine the possibility that the owner was involved in an arson scheme to obtain insurance proceeds.

In any case, the motive for an arson may be difficult to ascertain, or the determination may be based solely on an investigator's hunch. Nevertheless, motive is very useful in directing the subsequent course of the investigation. For example, it can suggest whether limited resources should be applied to examine a property owner's financial condition more deeply, to interview the boyfriend of a tenant family's teenage daughter, or to focus on some other lead.

Evidence of motive was present in 31 percent of the cases in the randomly selected investigation sample. This evidence category included the following: a witness who could testify to prior threats made by a potential suspect; documentary evidence in the form of financial or business records or insurance information; or statements as to motive made by a suspect or an accomplice; and other testimonial evidence as to motive. The relationship between such motive evidence and the identification of suspects is discussed below.

4.1.3 Identifying a Suspect

The goal of an arson investigation is the identification and prosecution of the firesetter. Almost every investigator interviewed for this study believed that the process of identifying a suspect and developing enough evidence to link that person to the fire far outweighed in difficulty the establishment of the fire's incendiary origin. Many factors contribute to the problem of suspect identification and linkage: the modus operandi of the arsonist; the motive of the arsonist; the availability and value of witness testimony; and the type of property burned.

Modus Operandi

Arson is a crime most commonly committed surreptitiously and without witnesses. Regardless of their motivation, most arsonists set their fires at

night.[1] Thus, there are likely to be fewer witnesses and, in any case, darkness may make positive identification of the suspect more difficult. In vacant or unoccupied structures, the problem is obviously compounded.

In one of the study sites, there was a series of arson fires in garages in a residential area. As many as 25 incidents over 10-1/2 months are believed to have been the work of a single individual using a consistent modus operandi. A few of the fires caused no damage, but several were very serious, causing up to $70,000 damage. A number of the fires spread to the residences attached to the garages, fortunately without causing injury. Even though people were at home at the time of some of these fires and discovered the fire themselves, no one actually saw the perpetrator. The geographic area in which the fires occurred was sufficiently large that a stake-out was infeasible. Moreover, investigators would have faced a difficult choice in a stake-out if they did see someone acting suspiciously: how far to let the suspect go in setting a fire (to prove attempted arson) without unduly endangering life and property. Thus, even with a repeated pattern of fires, investigators may be relatively helpless and forced to wait for a lucky break to identify a suspect and develop incriminating evidence.

Even linking a suspect to the location of the fire may be of little benefit, however. The firesetter may be legitimately present in the building where a fire has occurred, as is the case with tenants in multiple-unit dwellings. It is therefore often necessary to develop evidence connecting a suspect to the exact point of the fire's origin and to make that connection as close as possible in time as well. (Obviously, strong evidence of motive helps to undermine a suspect's contention that he or she was legitimately and innocently present at the scene.) There are a number of inherent difficulties in linking a suspect to the scene of an arson. For one thing, some arsonists were not at the scene at the time the fire started. Fraud arsonists often hire others to set fires for them and sophisticated firesetters often use mechanical devices or special techniques to delay the start of a fire until they can leave the scene and establish alibis. Thus, even if an investigator knows when a fire broke out, he may not know when it was set or be able to place a suspect at the scene at that time.

---

[1] Pisani, "Identifying Arson Motives," p. 23.

Motive

The frequency with which suspects are identified varies, depending on the motive involved and the availability of evidence on motive. As noted above, in many arsons for profit those who benefit from the crime may only have instigated the fire and may not be physically present at the scene at all. On a number of occasions, investigators have been frustrated in their attempts to learn the identity of a building's owner or gain access to insurance information, even when fraud is suspected. City tax or property records may be outdated and show a prior owner or an obsolete address. As one investigator stated, "[I]f the city collected its taxes, we wouldn't have the problem to begin with."

There are several strategies for obtaining insurance information. Provisions of the Standard Fire Policy and recently enacted arson reporting-immunity laws require the insured to provide various information and records to the insurer in support of the claim and require the insurer to provide information to public investigators and prosecutors. Such information can be extremely useful in establishing a fraud motive. However, it should be emphasized that policy and statutory provisions are not sufficient in themselves to ensure a flow of useful investigative information; careful cultivation of relations among investigators, prosecutors, and insurers is also necessary. (As suggested in Chapter 6, the importance of establishing close relationships with insurance companies is an additional argument for prosecutorial specialization in arson.) Still, without the cooperation of the owner, it may be difficult to identify the insurance company holding the policy on a building. In one city, investigators generally can identify the owner's insurance company only when an insurance agent requests a copy of the investigative report to meet the company's proof of loss requirements. If no request for a copy of the report is received, details of the insurance coverage may remain unknown. There is usually no central registry of insurance coverage on buildings in a city.[1] Without insurance information, investigators may be unable to determine whether the owner should be regarded as a possible suspect.

[1] Rhode Island has recently enacted legislation which attempts to address this problem. The statute permits localities to require that property-owners register their insurance coverage with an agency of the government.

Where there is a prior relationship between the arsonist and the victim, as in most spite cases, it is far easier to develop the linkage between the fire and the perpetrator than when the act is essentially random, as in the majority of vandalism cases. Pyromania or mental disorder may only become evident as a motive after the arrest of a suspect, unless there is a clear pattern of fires. Indeed, Table 4.2 shows that suspects were identified in all of the fires believed to result from pyromania or other mental illness. In spite cases, suspects are also almost always identified. This is another motive category which is difficult to identify without having a suspect in mind. Vandalism cases and cases without enough evidence to deduce a motive are the most difficult to focus on a specific individual.

Thus, in general, evidence indicating motive is extremely useful in suspect identification. At the same time, however, evidence of motive does not always lead to identification of a specific suspect; rather, it may simply remain a general indicator of the motive at work in the arson. Indeed, suspects were identified in only 58 percent of the cases with motive evidence present. The sites varied dramatically on this dimension, with suspects identified in only 33 percent of the cases with motive evidence in the Bronx, compared to 74 percent of such cases in Denver.

Witnesses

The best possible type of evidence to link a suspect to a fire is an eyewitness--a person who actually saw the suspect set the fire. However, such evidence was reported to exist in only four percent of the 400 cases in the randomly selected investigation sample. What is more, even an eyewitness may not be able to name the arsonist or provide a detailed description. A much more common type of linkage involves a witness who saw the suspect in the vicinity close to the time the fire broke out. This type of evidence varies widely in level of detail and general reliability.

In some instances, the witness who sees the suspect entering or leaving the scene is acquainted with him and can identify him for investigators or provide information which could lead investigators directly to an identification and arrest. But this is unusual. More typically, someone may be observed at or near the scene or even running from the building as the fire erupts. On questioning, the witness may say he saw a white male,

Table 4.2

Cases With Identified Suspects, Investigation Sample, by Motive

Motive	Cases With Suspects	
	Number	Percent of all Cases in Motive Category
Fraud	10	42
Pyromania	20	100
Spite	43	72
Vandalism	19	15
Other	7	44
Unknown	16	10
All Motives	115	29

approximately 20 to 25 years of age, wearing jeans and a red shirt, of medium height with a stocky build. But unless an investigator is on the scene immediately, takes the description and also sees the suspect (or relays it to patrol cars who are in the right place at the right time), without additional information it is unlikely that the suspect will be apprehended, especially in an urban setting. Even if the described individual is arrested and interrogated, the case is very weak without a confession or considerable additional evidence. In 13 percent of the investigation sample cases, only a general description was available and no named suspect was ever identified.

Property Burned

Table 4.3 shows that the type of property burned appears to influence the likelihood that a suspect will be identified. If persons were present in a structure at the time of a fire, there was a greater likelihood that a suspect would be identified in the case. On the other hand, if the structure was vacant, the likelihood that a suspect would be identified was greatly reduced. Clearly, these findings turn on the relative likelihood of there being witnesses to arsons in vacant and occupied buildings. These problems are particularly serious in the Bronx and Cleveland, the two study sites with the most vacant-building arsons. Indeed, the incidence of vacant-building arsons in the Bronx is largely responsible for the extremely low rate of suspect identification there (10 percent of cases in the investigation sample).

4.2 Arson Case Management

Arson may be a difficult crime to solve, but jurisdictions interested in attacking this crime as effectively and efficiently as possible need not abandon hopes of increasing their rates of identifying suspects and moving cases to prosecution. Although no one can propose strategies guaranteed to solve all arsons, there are some approaches that seem to work better than others and some techniques which may keep solvable cases from being sidetracked during the investigative process.

In this section, we review the following major phases of arson investigation caseload management and the ways in which each can facilitate or impede successful investigations:

- Selection of cases for follow-up investigation;

Table 4.3

Identification of Suspects by Characteristics of Property Burned, Investigation Sample, by Site

	Bronx		Denver		San Diego		Cleveland	
	Number With Suspect	Percent of All Cases With Characteristic	Number With Suspect	Percent of All Cases With Characteristic	Number With Suspect	Percent of All Cases With Characteristic	Number With Suspect	Percent of All Cases With Characteristic
Fire in Vacant Structure	0	0	2	18	3	33	6	14
Persons Present in Structure at Time of Fire	9	24	19	58	9	45	12	63

- Follow-up on identified suspects and leads;
- Disposition of arson investigations: termination without results and presentation to the prosecutor; and
- Prosecutor involvement in investigations.

Section 4.3 addresses the relative effectiveness of various models of organizing arson investigation units.

4.2.1 Selection of Cases for Follow-up Investigation

Success in arson investigations cannot always be attributed to the quantity or the quality of the effort expended. The recent study by the International Association of Fire Chiefs (IAFC) notes that arson caseloads seem to "break cleanly into two unequal parts"--the unsolvable and those ending quickly in arrest; it concludes that "[c]ases without leads are unlikely to benefit from the most exhaustive detailing. . . of the corpus of the crime."[1] In essence, there is a group of cases in which a suspect is identified and arrested at the outset of an investigation: our data show that approximately one-third of all defendants were arrested at the scene of the fire and another one-third were apprehended within 24 hours. The IAFC study reports that 42 percent of the arson arrests studied occurred at the fire scene.[2]

Aware that many cases may not be solvable regardless of the energy and time expended, managers of arson investigation units must decide which cases will be actively pursued and which will be dropped. Several factors may be involved in these decisions. One consideration is that publicity and public pressure may dictate that serious fires--those involving death, serious injury and/or high dollar loss--receive follow-up attention irrespective of the objective likelihood of their solution. In fact, fire seriousness factors seemed to have a limited effect on whether suspects were identified in a case. Table 4.4 shows that in Denver and Cleveland, cases involving

[1] International Association of Fire Chiefs, "Managing Arson Control Systems," pp. 3-104.

[2] Ibid., pp. 3-116. See also Kristen M. Williams and Judith Lucianovic, Robbery and Burglary: A Study of the Characteristics of the Persons Arrested and the Handling of Their Cases in Court, (Institute for Law and Social Research, 1979), for evidence that arrests made within 30 minutes of the offense have the best chance of resulting in conviction.

death or injury appeared more likely to produce suspects, whereas in the other sites, no such cases produced suspects. However, the number of such fires was so small that these variations may not be altogether meaningful. As noted in Chapter 3, the vast majority of the fires in the sample caused minor damage. Table 4.4 suggests that Denver is the only site in which fires with high dollar loss were more likely to produce suspects. Interview responses establish that serious fires are likely to receive additional investigative attention, but the sample data suggest that this extra effort does not generally result in identification of more suspects.

As to the other--largely quite minor--cases ostensibly eligible for follow-up investigative attention, the arson unit supervisor or individual investigator assigned in effect estimates their relative chances of solution and concentrates on the cases most likely to be solved--for example, those with identified suspects and other tangible leads. New cases continue to arise and old cases may grow stale from lack of new information; consequently, there is inevitably pressure on investigators, who can only handle so many cases at once, to turn their attention from the older cases to new ones as they are assigned.

As discussed in Section 4.4.2 below, several of the study sites have clear policies on how long cases may be actively followed up without result before they are designated inactive investigations. However, only in Cleveland did we find a clear procedure for deciding which cases receive follow-up attention. In that city, the supervisor in charge of the Police Arson Unit reviews each case as it is forwarded from the Fire Investigation Unit and decides whether to assign it for active follow-up at that time or to file it as closed ("No Further Investigative Leads"). In large part, his decisions are based on whether a suspect has already been identified or, to a lesser extent, whether there is information--for example, from an informant--which is likely to lead quickly to the identification of a suspect. Such a policy is neither inherently effective nor ineffective. Its effectiveness depends in large measure on how conservative the actual decisions are--in other words, whether the supervisor only assigns for follow-up cases with very clear suspects or extremely promising leads or is willing to pursue cases in which the information initially available is less conclusive. As noted below, it appears that the decisions in Cleveland are largely quite conserva-

Table 4.4

Identification of Suspects by Fire Seriousness Factors, Investigation Sample, by Site

Fire Seriousness Factor	Cases with Suspects Identified							
	Bronx[a]		Denver		San Diego		Cleveland	
	Number With Suspect	Percent of All Cases With Factor	Number With Suspect	Percent of All Cases With Factor	Number With Suspect	Percent of All Cases With Factor	Number With Suspect	Percent of All Cases With Factor
Fire Caused Death or Injury	0	0	3	75	0	0	1	50
Loss/Damage from Fire(s):								
$0-$1000	N.A.	N.A.	22	34	15	33	15	25
$1001-$10,000	N.A.	N.A.	10	45	7	23	15	44
$10,001-$50,000	N.A.	N.A.	2	40	3	43	1	20
More than $50,000	N.A.	N.A.	4	100	1	20	0	--[b]

[a] Estimates of fire loss/damage were rarely available in Bronx cases.

[b] There were no cases involving more than $50,000 loss/damage in Cleveland's investigation sample.

tive. In the other sites, the decision on follow-up may be based on similar criteria, but it is largely decentralized--that is, there is no initial screening of cases by supervisors, and the individual investigators decide how far to pursue a case.

However the decisions are made, we found no indication that investigators lavish undue attention on cases unlikely to be solved. Indeed, the press of heavy caseloads normally does not permit such a "luxury." In fact, by a rough measure of investigative effort--number of persons interviewed in a case--it appears that decisions on which cases receive follow-up attention are largely rational and efficient. Table 4.5 shows that, at least in three of the four study sites, the percentage of cases with suspects identified increases as the number of interviewees in a case increases. Admittedly, there is a question of causality which may weaken the validity of these figures--that is to say, having more interviewees in a case may result from, rather than lead to, the identification of a suspect. Although the numbers are extremely small, there is generally a similar relationship between number of persons interviewed and whether or not a case was presented for prosecution. Despite their interpretive difficulties, these data seem to suggest that resources are not being wasted on unworthy cases.

On the other hand, it is almost inevitable that in any system--and particularly a system in which cases are closed because of failure to identify a suspect at an early stage--at least some potentially worthy cases will not be pursued. Because they are often relatively slow to develop, possible arson-for-profit cases are almost guaranteed to receive short shrift. Investigators rarely have the good fortune to apprehend a suspect at the scene in premeditated arsons such as those for profit, particularly if a professional torch is involved. Jurisdictions differ in the extent to which they take a proactive stance toward arson for profit, but few are willing to pursue investigations beyond an early stage if promising leads do not appear. Even if an investigator is resourceful and manages to gather considerable information (such as tax and insurance records) suggesting that there were grounds for a fraud arson, the investigation is unlikely to proceed any further without evidence directly linking the owner to the arson.

In both Cleveland and the Bronx, where the arson-for-profit problem is clearly recognized by investigators, the relative hopelessness of cases

Table 4.5

Cases With Suspects Identified by Number of Persons Interviewed in the Case, Investigation Sample, by Site

Number of Persons Interviewed	Percent of All Cases in Category of Number of Persons Interviewed With Suspects Identified			
	Bronx (n=10)	Denver (n=41)	San Diego (n=32)	Cleveland (n=32)
0	0%	0%	9%	0%
1-4	22	31	29	37
5-10	10	66	64	56
More than 10	0	67	33	100

without an informant was repeatedly stressed by interview respondents. Even when investigators can detect a pattern of fires in buildings owned by the same individual, or when information is available suggesting a clear profit motive, investigators typically leave a case inactive until they get a big break. A major arson-for-profit ring in the Bronx was broken by an investigation spanning 18 months. This investigation did not begin, however, until one of the torches involved approached a uniformed officer on the street and offered information on the arsons because he felt that one of the landlords had cheated him out of money owed for his work. In Cleveland, although investigators suspected that a certain slumlord was engaging in arson for profit, they had no information upon which to act until a torch, made nervous by intensive investigative pressure from federal and local investigators working on a different case, unexpectedly walked into the arson unit and told all he knew.

Of course, more testimony than that of the torch is necessary. When evidence comes from an accomplice, the law requires corroboration, thus necessitating additional effort by investigators to develop sufficient supporting evidence.[1] Thus, in the Bronx and Cleveland, most fraud arsons (at least those committed for insurance proceeds) do not receive high priority in the initial decision to assign cases for active follow-up unless some direct evidence is available.

4.2.2 Follow-up on Suspects and Leads

Identified suspects and promising leads are so relatively rare in arson cases that they should always be pursued as vigorously as possible. Nevertheless, in every site we found cases in which leads were not pursued.[2] In 15 percent of the cases not presented for prosecution, the information in the file suggested that promising leads or suspects were not pursued. Despite the value of this information, instances were observed in which investigators failed to follow up on a vehicle license plate number or

[1] This legal issue will be discussed in detail in Chapter 6.

[2] This is apparently a common problem in arson investigations in almost all jurisdictions. See International Association of Fire Chiefs, "Managing Arson Control Systems," pp. 3-41. Information loss is cited as an important reason for case attrition in a major study of robbery, burglary, and assault cases. See Floyd Feeney et al., Arrests Without Conviction: How Often They Occur and Why--Final Report (Washington, DC: U.S. Department of Justice, National Institute of Justice, 1982), pp. 218-219.

partial information on a suspect. In one case, a witness told investigators that he knew the first name of a person seen running from the fire scene and could ascertain the person's last name. Apparently, no one interviewed the witness again and no further information was recorded in the file concerning the suspect.

It is quite probable that these lapses are a result of caseload pressures or preoccupation with other investigations, perhaps involving a major fire or more promising leads. Some of the cases in which follow-up did not occur involved trash fires and other fires which caused little or no damage. Cases of this nature, regardless of the specific crime involved, typically receive low priority. On the other hand, some of these cases might be easily solved if the available information were used and the investigation continued. Currently, investigators are essentially screening out a portion of cases without fully exploring their evidentiary strengths and thus reducing the number of cases ultimately presented to the prosecutor for screening. Although some of these cases may indeed be too weak (or trivial) to consider for prosecution, others are never sufficiently developed for that judgment to be made.

The surprising frequency of failures to follow up on leads in arson investigations suggests a need for more careful monitoring of arson caseloads by individual investigators or unit supervisors, or both. Perhaps institution of periodic caseload reviews or development of "tickler files" on active investigations would help ensure that tangible leads receive appropriate and timely attention. One investigator mentioned that he had considered instituting a periodic review of his own case files to ensure that nothing had been overlooked or sidetracked during a particularly busy period. Under such a review system, cases pushed aside during a busy period could be reactivated when time permitted. This review, which might also be performed by supervisory personnel, could be useful as well in determining when cases are strong enough to be considered for prosecution. We did not find such systems in practice in any of our sites, but it would appear that they might be helpful adjuncts to management procedures in arson investigation units.

It is clear that the relative rarity with which suspects are identified in arson cases reflects not only lack of available evidence and the inherent difficult of the investigative task, but also weaknesses in investi-

gative structures and procedures. The extent to which overall arson unit organization may contribute to or reduce the incidence of failures to follow up will be discussed in Section 4.3.

4.2.3 Investigative Dispositions: Termination without Results and the Decision to Present for Prosecution

As noted above, most of the arson cases that result in prosecution are cleared fairly soon after the fire. Two-thirds of the arrested defendants in our sample were apprehended within 24 hours of the fire. These cases are resolved so quickly that the decisions concerning follow-up investigation and the timing of presentation for prosecution are essentially irrelevant. However, it is important to stress that these cases represent only a very small percentage of all investigations. Most cases are not solved quickly and must compete for limited investigative resources.

Termination without Results

Resource allocation considerations not only affect the initial decision to investigate, as described above, but also influence decisions about when to terminate an investigation, either by referring the case for prosecution or by closing it because of insufficient evidence.

Two of the study sites have established policies for placing cases on inactive status when there is reason to believe they cannot be solved. In the Bronx, a case is closed if five to seven days elapse in which no new evidence has been developed. In San Diego, investigators are expected to treat a case as inactive after 20 days, unless there has been clear progress. In Denver, there are no policies concerning when cases should be considered inactive; investigators exercise their own discretion in keeping cases open or terminating them.

Even if a case is initially assigned for a follow-up investigation and continues to be actively pursued, there is no guarantee that the investigation will be successful. For example, leads that initially looked promising may not uncover the anticipated evidence. Similarly, in the course of the follow-up investigation, the investigator may find very strong evidence of an alibi for the defendant. In either instance, the whole complexion of the case may be radically altered and the investigator may find himself with a

very weak case. It is then usually up to him to decide whether additional effort is likely to turn up new leads or otherwise strengthen the case or whether the case should be closed without results. As is true throughout the investigative stage, these decisions must be made by balancing the anticipated return against the expenditure of resources. One investigative supervisor interviewed in the course of this study likened the investigative process to a business, noting that both had to show a "profit."

The investigator handling a case is responsible in large part for deciding when a case has been sufficiently investigated. In fact, this decision-making process is a constant part of the investigation. Informal consultation between investigators and prosecutors facilitates this process. Since not all investigative files contain reference to these informal conversations, in many instances it was impossible to determine how often decisions to drop cases resulted from the investigator's independent initiative as opposed to a joint decision by the investigator and prosecutor.

Either way, it is apparent that many cases are not solved, despite fairly thorough investigations. Investigators may follow all available leads, including interviewing a potential suspect, but eventually come to the conclusion that there is insufficient evidence to support criminal charges. This judgment may be based on the weakness of the case or on information supplied by the suspect during the interview. An example of each situation is described below:

- An investigation of three fires, two in trash dumpsters and one in a truck, revealed evidence that a suspect had been observed at the scene of the fires although no one had witnessed the arsons. Investigators questioned the suspect, who admitted setting other unrelated fires but denied burning the property involved in this case. With no additional incriminating evidence, investigators dropped the case.
- Following a fire in an abandoned warehouse where there had been a history of problems caused by juveniles, investigators learned that one juvenile suspect had been seen in the vicinity close to the time of the fire. That juvenile was questioned but investigators became convinced that he was innocent. During the course of the interview, this juvenile informed investigators that a second juvenile had claimed to be responsible for the arson. The second juvenile was also questioned but he denied setting the fire and, in addition, provided an alibi. This case was closed without further development.

Even cases which are solved may be terminated without prosecution, through exercise of the investigator's discretion. The investigator may feel that the problem has been resolved and that there is no need for prosecution; for example, he may feel that the case is too minor to justify the expense of prosecution. In the following case, an arrest warrant could likely have been obtained but was not; instead the case was closed:

> • During an argument with his former girlfriend and her new boyfriend, the suspect threatened the pair. The day before the suspect was due in court on assault charges stemming from this incident, he was seen by his ex-girlfriend at her house. Immediately after spotting the suspect, she heard a sound and saw fire outside the house. Fire investigators had no doubts that the fire was incendiary, since they identified six points of origin and discovered that an accelerant had been used to start the fire. No charges were ever filed, however. Investigators were likely influenced by the fact that the suspect left town soon after the fire and that no additional problems occurred, the absence of any real damage or injury, and the possible revenge motive on the part of the victim, making her subject to attacks on her credibility during cross-examination.

Although in some cases, like the one just described, the available evidence may suggest why a case was closed without formal screening for prosecution, some apparently strong circumstantial cases are also terminated without results. On occasion, a case may never lead to prosecution even though considerable investigative effort has developed numerous pieces of evidence. This occurred in the following case:

> During a period of less than two hours, a hospital experienced a fire in a waste container and a second fire in a storage room. Neither fire was particularly serious, and the fire department was not even notified of the first incident. Not only had the hospital had a problem with fires before, but there had been a history of thefts and vandalism during the late housekeeping shift. The prior administration had also been reluctant to risk a confrontation with the union over troublesome employees, but the new administrators informed investigators that they intended to take a harder line against crimes by employees. Two workers were identified as likely suspects. The investigation focused on one employee who was suspected of involvement in damaging equipment, writing obscene graffiti, spraying mace in a restroom and possibly starting an earlier fire. This employee had also been found in unauthorized possession

> of a master key. Prior to the fires, the hospital had notified him that it intended to take disciplinary action. When the suspect was interviewed, he accused other employees of setting the fires. The investigation showed that the suspect had access to mace, and his handwriting was linked by an expert to some of the graffiti. The suspect refused to take a polygraph examination. It is unclear whether this case was ever discussed with the prosecutor, but no charges were ever filed.

Although investigators clearly perform some "pre-screening" (with or without benefit of advice from a prosecutor), there are some cases which, through oversight, simply never reach prosecution. The following case is an example:

> One tenant saw another tenant set fire to some rubbish in the basement of their apartment building. There had been several recent small fires in and near the building and this same tenant had been nearby on several occasions. When confronted, the suspect denied setting the fire on the day in question but admitted responsibility for some of the earlier fires. The investigation revealed that the woman seen setting the fire was regarded as "a little strange" by other tenants and was already under out-patient psychiatric care. Since no charges were ever filed, investigators were asked whether this was a deliberate decision to screen out a case involving no damage and little likelihood that the criminal justice system could offer an effective response The investigator felt strongly that decisions should not be based on these factors and that this case, had it not simply been overlooked, would have been presented to the prosecutor for consideration.

The Decision to Present for Prosecution

The investigator's decision on whether to present a case for prosecution is a complex one. The influencing factors involved seem to vary widely across jurisdictions. Obviously, the decision to present is influenced by prior decisions concerning which cases to develop. Once cases have been developed, they may be presented rather unselectively (as is apparently the case in Cleveland) on the theory that it is the prosecutor's job to decide whether a case is worthy of prosecution. In other jurisdictions (like Denver, as discussed in Chapter 5), cases may be discussed informally with a screening prosecutor prior to presentation and/or formally presented as ways to obtain advice on evidentiary strength and further case development. Finally, there may be active pre-screening or selection by investigators of

cases to be presented for the consideration of the prosecutor. This occurs to some extent in every jurisdiction, and it may be based on independent assessments of the evidentiary strength of each case or on predictions of the prosecutor's reaction,[1] or on some combination of the two.

In any case, it is worth comparing the evidentiary characteristics of cases presented for prosecution and those not presented. Table 4.6 compares presented and non-presented cases as to the availability of certain evidence types. These figures show clearly that presented cases are much stronger than non-presented cases in terms of direct evidence of the suspect's commission of arson (eyewitness or confession) and evidence of the suspect's opportunity to commit arson. On the other hand, evidence of incendiary origin and evidence of motive are not particularly useful in discriminating between presented and non-presented cases. Thus, it is the evidence types which serve to link the suspect to the actual commission of the arson that appear most important in investigators' decisions whether to present a case for prosecution.

Considered from another perspective, these figures also suggest a general conservatism in investigators' decisions whether to present cases for prosecution. Admittedly, presented cases are much more likely than non-presented cases to include <u>direct</u> evidence of the suspect's commission of arson--and, in fact, very few non-presented cases include such evidence. On the other hand, although there is still a substantial discrepancy between presented and non-presented cases on this score, in absolute terms almost one-half of the non-presented cases include evidence of opportunity and almost two-thirds include evidence of motive.

Table 4.7 compares presented and non-presented cases by various <u>combinations</u> of evidence available in the case. This shows clearly that presented cases are likely to have direct evidence (category 1) or a combination of circumstantial elements including opportunity (categories 2, 3, 5). Indeed, 92 percent of presented cases fall into these categories, as opposed to 41 percent of non-presented cases. These figures suggest again the

[1] For an example of such pre-screening based on investigators' perceptions of the prosecutors' reactions, see Barbara Smith, "Pre-Indictment Decisionmaking," (Report submitted to U.S. Department of Justice, National Institute of Justice, n.d.), p. 30n.

Table 4.6

Adult Cases Presented for Prosecution (Investigation Sample) and Adult Cases Not Presented for Prosecution (Investigation Sample) by Key Evidence Types Present

Evidence Type	Percent of Presented Cases with Evidence Present (n=37)	Percent of Non-Presented Cases with Evidence Present (n=66)
1. Evidence of Incendiary Origin[a]	68	61
2. Evidence of Motive[b]	68	62
3. Evidence of Opportunity[c]	89	50
a) Suspect/Defendant seen entering/leaving scene[d]	86	41
4. Direct evidence of suspect's/defendant's commission of arson[e]	54	11
a) Eyewitness to commission of arson[f]	19	2
b) Confession[f]	43	9

[a] This variable was coded positively if any of the following evidence was present: laboratory analysis indicating the presence of an accelerant; firefighter observations of fire characteristics suggesting arson; expert testimony on multiple origins, burn patterns, trailers, ignition devices, or presence of accelerants; physical evidence such as ignition devices, matches, accelerant containers, or fire debris; or testimonial evidence from non-expert witnesses regarding the presence of ignition devices or accelerants.

[b] This variable was coded positively if any of the following evidence was present: financial, property or insurance records indicating a possible fraud motive; accomplice statements regarding motive; testimony concerning defendant/suspect threatening or quarreling with the victim; or other motive-related testimony.

[c] This variable was coded positively if any of the following evidence was available, which linked the defendant/suspect to the scene or contributed to establishing opportunity or presence: fingerprints; physical evidence such as clothing of the defendant/suspect; statements or admissions by the defendant/suspect as to opportunity; witnesses to the defendant/suspect entering or leaving the scene close to the time of the fire; witnesses to the defendant/suspect in possession of accelerant; or witness identification of defendant's/suspect's vehicle.

[d] This is a sub-category of "opportunity" evidence.

[e] This variable was coded positively if any of the following direct evidence of the defendant's/suspect's actual commission of arson was present: confession; statements by accomplices; or eyewitness to the commission of arson.

[f] These are sub-categories of "direct" evidence.

Table 4.7

Adult Cases Presented for Prosecution (Investigation Sample) and Adult Cases Not Presented for Prosecution (Investigation Sample) by Evidence Combination/Type Present

Evidence Type[a]	Percent of Presented Cases with Evidence Present (n=37)	Percent of Non-Presented Cases With Evidence Present (n=66)
1. Direct evidence of Suspect's/Defendant's Commission of arson	54	11
2. No Direct Evidence/All of the following: Evidence of Incendiary Origin, Motive, and Opportunity	11	18
3. No Direct Evidence/No Motive Evidence/Both of the following: Evidence of Incendiary Origin and Opportunity	19	9
4. No Direct Evidence/No Opportunity Evidence/Both of the following: Evidence of Incendiary Origin and Motive	5	23
5. No Direct Evidence/No Evidence of Incendiary Origin/Both of the following: Evidence of motive and opportunity	8	3
6. No Direct Evidence/One of the following: Evidence of Incendiary Origin, Motive, or Opportunity	3	30
7. None of the following: Direct Evidence; Evidence of Incendiary Origin, Motive, or Opportunity	0	6
TOTAL	100	100

[a]For definitions of evidence types, see Table 4.6, notes a-f.

importance of linkage evidence in decisions to present, but they also reveal that such evidence, as well as apparently strong combinations of circumstantial elements, is available in many cases which investigators choose not to present. Further confirmation of these findings is provided by Table 4.8. This table, which focuses on suspects alleged to have actually set a fire (as opposed to hiring someone else to do so), reveals not only that an overwhelming 92 percent of the presented cases had either direct or circumstantial evidence linking the suspect to commission of the arson, but also that over one-half of the non-presented cases included such evidence.

Multivariate Analysis of the Decision to Present

We used multiple regression analysis to learn more about the relative contribution of various evidence types to the decision to present a case for prosecution.[1] For each site, we ran several alternative models using a wide variety of evidence types as independent variables. The data were restricted to all cases for which a suspect was identified, and the dependant variable for all models was whether or not the case was presented to the prosecutor.

Table 4.9 presents some interesting aspects of the regression equations. For each site, we have given the highest proportion of variance explained (R^2) and have listed the statistically significant variables in the corresponding equation, along with the sign (positive or negative) of each coefficient.[2] A positive value can be interpreted to mean that existence of the evidence type seems to be associated with a higher likelihood that the case will be presented.

Several overall points can be made on the basis of the findings from these analyses. First, the proportion of explained variance (R^2) is in all cases less than 50 percent. While the values are quite respectable for social science research, they reflect the fact that much of the decision-

[1] A more detailed description of the regressions may be found in Appendix A.

[2] The value of R^2 represents the proportion of variation in the decision to present or not to present that is related to, or "explained" by, the independent variables. The significant variables represent the specific types of evidence that appear to play a meaningful, independent role in decisionmaking.

Table 4.8

Adult Cases Presented for Prosecution (Investigation Sample) and Adult Cases Not Presented for Prosecution (Investigation Sample) in which a Suspect/Defendant was Alleged to have Actually Set a Fire,[a] by Nature of Evidence Linking Suspect/Defendant to Commission of Arson

Case Category	Nature of Evidence[b]	Percent of Presented Cases with Evidence Present (n=37)	Percent of Non-Presented Cases with Evidence Present (n=65)
1. Direct Linkage of Suspect/Defendant to Arson	Direct evidence of suspect's/defendant's commission of arson[a]	54	11
2. Circumstantial Linkage of Suspect/Defendant to Arson	Evidence of opportunity[b]/No direct evidence of suspect's/defendant's commission of arson	38	40
3. No Linkage of Suspect/Defendant to Arson	No evidence of opportunity/No direct evidence of suspect's/defendant's commission of arson	8	49
	TOTAL	100	100

[a] i.e. excludes cases in which the suspect/defendant was accused of hiring someone else to set the fire.

[b] For definitions of evidence types, see Table 4.6, notes c and e.

Table 4.9

Summary of Regressions Relating Decision to Present to Various Evidence Types

Site	Variable	Sign	Level of Significance	R^2
Bronx	Evidence of Opportunity	+	.01	
	Direct Evidence of Commission of Arson	+	.01	
				.364
Denver	Suspect seen entering/ leaving scene	+	.01	
	Confession	+	.10	
	Eyewitness testimony	+	.05	
	Suspect statement on motive and fraud case[a]	-	.01	
				.287
San Diego	Fraud case	+	.05	
	Evidence of incendiary origin	+	.01	
	Evidence of motive	+	.05	
	Evidence of opportunity	+	.01	
	Direct evidence of commission of arson	+	.05	
	Evidence of incendiary origin and fraud case[b]	-	.01	
				.464
Cleveland	Evidence of accelerants	+	.10	
	Suspect seen entering/ leaving scene	+	.05	
	Expert testimony on cause and origin	-	.05	
	Witness problems	+	.10	
				.223

[a] This variable represents the interaction between suspect statement on motive and fraud.

[b] This variable represents the interaction between evidence of incendiary origin and fraud.

making process cannot be related directly to the kind of evidence available. Other factors, such as the quality of evidence and, as already noted, limitations on resources and initial decisions as to which cases will receive follow-up attention, undoubtedly play a role as well.

Second, despite indications (to be discussed in Chapter 5) that fraud cases may be subjected to more stringent prosecutorial screening standards, there is slight evidence that fraud cases are more likely to be presented than other arson cases. In San Diego there was a significant relationship between the fraud motive and the decision to present, and the relationship was positive. However, as explained in Appendix A, we included in this regression only cases in which at least one of the defendants was accused of actually setting the fire. So this result is not very surprising. In preliminary regressions, including cases in which the only suspects were persons alleged to have hired a torch, there was stronger evidence that fraud cases were more likely to be presented.

Third, the regression analyses confirm the finding that evidence linking the suspect to the actual commission of the arson, or at least to the scene, is extremely influential in the decision to present. Evidence of opportunity (such as the suspect being observed entering or leaving the scene) increases the probability of presentation in all four sites. Direct evidence (confession or eyewitness) linking the suspect to commission of the arson appears important in all sites except Cleveland. Evidence on cause and origin of the fire appears much less important in influencing the decision to present. As will be discussed in Chapter 5, this factor apparently had little effect on prosecutorial screening decisions either. This seems to confirm the notion that evidence of incendiary origin is confidently perceived as a given by both investigators and prosecutors in case presentation and intake decisions. However, in certain instances, this confidence may be misplaced, since arson cases have been lost at trial largely because of unconvincing evidence of incendiary origin. (This is discussed in Chapter 6.)

Comparing the sites, it is noteworthy that the decision to present is best explained by evidence variables in San Diego. As we will discuss in more detail in Chapter 5, San Diego is the only study site with an explicit set of prosecutorial screening guidelines for arson cases. It is possible

that these strong guidelines set the tone for a system that discourages the presentation of cases lacking the required evidence types. On the other hand, Cleveland appears to have the least evidence of systematic screening related to our measured evidence variables. Our interviews in Cleveland led us to believe, however, that many cases were not presented simply because of failure to follow up on possible leads. To test this hypothesis, we incorporated in a follow-up set of regressions a dummy variable representing failure to follow up a case. Only in Cleveland did a significant relationship appear for this variable.[1] Thus, it appears that the decision to present in Cleveland hinges largely on whether the case was followed up, not on the existence of particular evidence elements. In short, investigators' pre-screening is very lenient in Cleveland relative to the other study sites. The striking finding, shown in Table 4.9, that witness problems appear to be positively associated with case presentation in Cleveland seems to confirm, in the extreme, the hypothesis that pre-screening is very lenient in that city. However, there is another explanation for this: apparently investigators present to the prosecutor some cases with obvious problems--such as a key witness who refuses to testify--realizing that they will be rejected. This constitutes a simple way to clear such cases from the investigation unit's records.

In view of the high conviction rate in arson cases reported in Chapter 3 and the apparent evidentiary strength of many non-presented cases, it would appear that investigators might consider presenting more cases for prosecutorial screening. To the extent that investigators fail to present cases that they anticipate prosecutors will reject, both organizations may need to re-analyze their decision-making process. In addition to presenting more cases which they have developed, investigative units may also wish to explore ways to develop more cases to the point that they may be presented. These might include re-evaluating and perhaps liberalizing the criteria used in selecting cases for follow-up investigation and instituting measures (such as those described above) to reduce failures to follow up on identified suspects and tangible leads.

---

[1] Indeed, when failure to follow up was included, the value of R^2 increased to .702 and all other variables became non-significant.

It is also extremely important that investigators document their work clearly, completely, and in logical sequence in the reports that they prepare. Investigative information that goes undocumented or is incompletely or confusingly documented may cause the investigator himself to waste time or to forget important details if he returns to a case after it is inactive for a time. Moreover, it is extremely important that the development of cases presented to the prosecutor be fully, clearly, and logically documented. In San Diego, the Metro Arson Strike Team has developed a standardized format for all investigative reports that is designed to present a step-by-step view of the evidence and to help prosecutors to locate key information with ease. (This format is included as Appendix C to this report.)

The following two sections discuss the ways in which prosecutors may participate in developing and managing arson investigations, and the strengths and weaknesses of various organizational approaches to arson investigation in moving cases from investigation to prosecution.

4.2.4 Prosecutor Involvement in Investigations and Investigative Dispositions

As noted in Chapter 3, sample data from this study suggest that prosecutors only infrequently become involved in arson investigations prior to formal case presentation. Much of the literature on arson prosecution advocates early, direct, and, even supervisory involvement by prosecutors in arson investigations. It is often urged that prosecutors regularly attend fire scenes, so as to provide on-the-spot advice regarding evidence collection and the legality of the search and to develop a more graphic sense of the crime for later presentation to a jury. Some commentators even argue that a prosecutor should direct the entire investigation.[1]

The study respondents--both prosecutors and investigators--generally did not subscribe to this view. There appears to be a strong sense that the

---

[1] See, for example, Greg E. Burnette, Jr. and Lawrence W. Smith, Florida Arson Prosecution: A Trial Manual for Florida Prosecutors (Tallahassee, FL: Department of Insurance, Division of State Fire Marshal); International Association of Fire Chiefs, "Managing Arson Control Systems," pp. 4-89; Richard Ku, Theodore M. Hammett, Deborah Day Emerson et al., "Arson Control: A Synthesis of Issues and Strategies Based on the Arson Control Assistance Program," (Report submitted to U.S. Department of Justice, Law Enforcement Assistance Administration, November 1981), Section 3.3.

arson investigators know what needs to be done at the fire scene and in the subsequent criminal investigation. In rare cases of extremely serious arson fires, it may be worthwhile for the prosecutor to attend the scene. In complex arson-for-profit cases, an expanded and perhaps directive prosecutorial role in the investigation may be advisable. But, generally speaking, the prosecutor's role in arson cases is, and should be, largely advisory and consultative--that is, being available to investigators to offer legal advice on warrants and searches and to evaluate cases for sufficiency of evidence.

Depending on the degree of ongoing prosecutorial involvement in the investigative process, the investigator's decision whether or not to present a case for screening may become irrelevant. For example, the arson prosecutor in the Bronx is actively involved in arson-for-profit investigations. He has instituted a policy requiring investigators to call an assistant district attorney from the arson unit (an attorney is on call 24 hours a day) before making an arrest. As discussed in Chapter 5, this provides an early opportunity to screen cases for legal sufficiency. However, it also allows the prosecutor to decide whether the investigation should be expanded to include others involved in an arson before triggering speedy trial requirements and losing the element of secrecy by arresting the initial suspect. The approach has proven especially effective when investigators apprehend a torch at the scene of a fire and the prosecutor and investigators, working jointly, are able to convince him to cooperate and assist in gathering incriminating evidence against the property owner who hired him. The following case provides an example of this strategy:

> Arson detectives received information from a confidential informant that a landlord had hired a torch and was planning to burn one of his apartment buildings for the insurance proceeds. This case was particularly interesting to investigators since the building was occupied and they had had the landlord under suspicion for a long time. Resource limitations precluded an ongoing stake-out of the building, since no one had any idea when the fire was to be set. However, when the informant notified the police that the fire was to be set that night, a stake-out was established. Investigators manning the stake-out had a very delicate problem. They had to let the torches go far enough in their preparation for the crime so that they could legally be charged with attempted arson ("beyond preparation, short of completion" or "dangerously close to completion") but could not risk the threat to life or property that would result if the torches were not stopped in time. They watched the torches make several trips into the building and saw them carry in something that looked like a can of gasoline. Finally, afraid to wait any longer, the investigators entered the building and apprehended the torches. Upon the advice of the prosecutor, who was already at the arson unit's office, the torches were not arrested, but "detained" and offered the opportunity to cooperate with the investigators in their efforts to implicate the landlord.
>
> Examining the apartment where the torches were preparing to set the fire, investigators realized that they had acted with little time to spare. Their photographs vividly depicted the care taken by the torches to ensure that there would be total destruction of the structure. Sofas were standing on end and were leaning against the wall so as to conduct the flames to the structure as rapidly as possible. Clothing was draped over the windows and scattered around the premises for the same purpose. Bathroom fixtures were stuffed with combustible material. Holes had been cut in the ceiling to create a chimney effect. The windows had been painted black to delay detection of the fire from outside the building until it had been underway long enough to break the glass or spread through the roof or into another apartment.
>
> Back at the arson unit office, the torches agreed to cooperate. They were questioned by investigators and the prosecutor about their prior dealing with the landlord. As one torch had had most contact with their employer, investigators decided that he should make a call to the landlord on a tapped telephone and try to discuss the planned fire with him. The landlord was reluctant to say anything over the phone and suggested that he and the torch should meet. Arson investigators were experienced and well-equipped to deal with this situation. The torch was outfitted with a body microphone and sent to meet with the landlord while detectives kept watch nearby. Although the strategy was unsuccessful this time, since the torch reneged on his offer to cooperate, indictments were returned on other evidence against all three co-conspirators.

Other prosecutors' offices may not be as aggressive in involving themselves in ongoing arson investigations. A prosecutor may be tangentially aware of an ongoing investigation if it is related to a case already before the court. However, the prosecutor may not feel it is his or her responsibility to follow up on the progress of the case and therefore may take no action until the case is presented for screening. If the prosecutor who is aware of the investigation does not also handle case screening, it is unlikely that he will take any steps to see that the investigation leads to prosecution, even if there is already enough evidence to justify charges. Since in almost every case investigators initiate the sequence of events

leading to charges being filed, it is not surprising that the prosecutor in the case below took no action:

> A torch implicated the owner of a building in statements to investigators. Since charges could not be based solely on the evidence provided by an accomplice, investigators equipped another informant with a recording device during a conversation with the owner. Sufficient corroboration was obtained by this approach, in the form of incriminating statements by the owner. Although the participating investigators were aware of all available evidence and a summary of the evidence was contained in the case folder of the prosecutor handling the case against the torch, no charges were filed against the owner. Investigators had originally hoped to broaden the case against the owner to include other fires but, once this plan proved infeasible, the entire case was dropped. The prosecutor who was privy to the evidence against the owner was not responsible for issuing cases and therefore took no action.

This example points up the desirability of prosecutors' playing a more aggressive role in monitoring ongoing arson investigations to ensure that suspects or leads are not lost. This, in turn, constitutes another argument for some form of specialized arson prosecution.

Not all cases presented to the prosecutor for review are submitted in the belief that charges should be filed. In Cleveland, a number of cases presented but rejected involved victims who had signed statements stating that they did not wish to pursue the case against the suspect. Investigators routinely took these cases to the prosecutor for a pro forma rejection as a convenient way to close a case.

Investigators may also present a case to the prosecutor to seek a "second opinion" even though he has doubts about it. The following is an example of this approach:

> An investigation of a half-million dollar fire in an apartment building, which had a history of code violations and which investigators believed to be overinsured, led to a difference of opinion on cause and origin. At the time of the fire, the building was unoccupied and undergoing renovation. The only person in the room where the fire started was a worker using stains and thinners. He claimed the fire was accidental and the investigator's scene examination supported this story. However, the insurance company investigated this fire very aggressively, hiring its own fire investigator who reported the presence of flammable liquid pour patterns and concluded that the fire was an arson. The city investigator suspected that the insurance company, realizing they had made a mistake in issuing a policy for such a high value, was looking for a way to avoid paying on the claim. Nevertheless, the case was submitted to the prosecutor for screening. Despite the investigator's doubts about the case, he felt he "owed it to the insurance company" since their finding differed from his. The case was rejected and ultimately the insurance company settled the claim.

Most cases are presented with the expectation that charges will be filed; but the two examples just recounted show that investigators may also use prosecutors to help them manage and even dispose of cases. In the following section, we consider the relative effectiveness of various organizational approaches to arson investigation in facilitating the management and development of cases.

4.3 Patterns of Organization for Arson Investigation

In assessing the effectiveness of the different approaches to arson investigation which we have examined in the course of our study, we are primarily concerned with the ability to move cases from the investigative process to prosecution. Since our starting point is fires which have been determined to be arson, we are not able to make any systematic observations on the issue of failure to detect arson, through misclassification of some fires as accidental and other errors. Instead, we must concentrate on what occurs once the initial determination is made.

Cases can "fall through the cracks" in any type of organization. The following example illustrates how this may occur even within the caseload of a single investigator or pair of investigators operating as partners from start to finish:

> A $75,000 fire in a commercial warehouse was investigated, and determined to be an arson. An accelerant was found to have been used. A possible motive and a likely suspect surfaced very early in the investigation. Witnesses informed the investigator of an employee who had been recently fired and was thought to be quite angry. The investigator followed up on this lead but came to the conclusion that the suspect was innocent since he had an alibi and passed a polygraph test. This individual named a second potential suspect--another employee who had admitted (to the first suspect) burglarizing the warehouse a few weeks prior to the fire. Although the arson investigator spoke to a burglary detective concerning the case, no further action was taken. The investigator candidly admitted that he never re-contacted the burglary detective nor did he interview the second suspect. Thus, this case remains unsolved.

Arson investigation in the city of Cleveland operates under a sequential framework. However, the division of labor between the Fire Investigation Unit and the Police Arson Unit is not precisely defined in theory or in practice. The "original investigation" is the responsibility of the Fire Investigation Unit. This includes the following elements: scene examination; identification, collection and preparation of physical evidence for scientific analysis; initial interviews with firefighters and witnesses; and final determination of the fire's cause and origin. Fire investigators are also empowered to make arrests. Once this process is completed, a case is turned over to the Police Arson Unit for follow-up investigation.

Although both units may be involved in the on-scene stage as well as in the follow-up investigation, typically the Fire Investigation Unit begins the work and the case is not forwarded to the police unit until a few days after the fire. There seems to be little doubt that the Fire Investigation Unit completes the cause and origin determination and processes any physical evidence during that interval. The unit also forwards reports of any testimonial evidence obtained at the scene. What is far less clear, however, is the process for following up on evidence gathered during this initial investigation. Leads discovered in the course of interviews at the scene of the fire are sometimes explored by fire investigators and sometimes noted in reports passed on to the police unit. Since there are no clear guidelines indicating the extent of the fire investigator's responsibility, it is not surprising that some slippage occurs. In one case, for example, fire suppression personnel suggested to fire investigators that a certain individual might have valuable information for them. Investigators made an unsuccessful attempt to contact the person and left a note requesting that the person call them. The case was forwarded to the police unit but seemingly neither fire nor police investigators made further attempts to contact the potential witness.

Given the difficulty discussed earlier in linking a suspect to the commission of arson, this case and others in which similar problems appeared may have been dropped as a result of a realistic appraisal of their weak evidence. The workload faced by arson units makes it necessary to set some priorities. However, organizational structures and procedures may cause otherwise solvable cases to be overlooked. Cleveland's situation is similar

to that in many jurisdictions throughout the country and poses questions that should be addressed more systematically.

In some circumstances, it may be appropriate for the fire investigator to remain involved in a case, particularly if the cause and origin determination takes longer than usual (as might be the case if laboratory analysis is requested), thus delaying the police unit's entry into the case. In other instances, however, there may be unnecessary duplication of effort if the fire investigator does anything beyond initial interviews at the scene of the fire. These are all very difficult issues to resolve, either by guidelines reflecting policies agreed upon by the involved agencies, or on a case-by-case basis. However, the overall objective should be clear: as few cases as possible should "fall through the cracks" either within a single agency or when multiple agencies are involved.

Divided investigative responsibility does not <u>necessarily</u> lead to issues of overlapping authority or problems in transferring cases from one agency to another. In some cities, fire and police personnel perform different duties but are called to the scene at essentially the same time and commence work simultaneously. This was the procedure followed in the Bronx at the time our study began. Fire marshals were called to a fire to do a scene examination, while police detectives accompanied them to begin to locate and interview witnesses. (Personnel of both agencies may arrest a suspect if the need arises.) Since there is no delay in police entry into the case, responsibility for follow-up clearly lies with the detectives. In the past, however, the historical issue of turf between fire and police personnel has been a factor in the working relationships of investigators. Thus, until recently, fire investigators and police detectives in the Bronx worked a fire simultaneously but not typically as a team. This situation has changed, however. Within the past year, the Bronx has converted to the use of a team approach. Interview respondents indicated that communication and coordination have improved under the new approach, although there have been difficulties stemming from the differing shift schedules.

Problems of coordination and communication can occur within a joint unit as well. In San Diego, for example, investigators in the Metro Arson Strike Team (MAST) work different schedules depending on their departmental

affiliation.[1] In the early days of the unit, which was established in June 1980, investigators operated on a system of divided responsibility even though belonging to a single entity. That is, fire investigators performed the scene examination and perhaps some initial interviews and then turned the case over to the assigned police investigator for follow-up. To address the problem of differing shift patterns, the unit established a policy that fire investigators' reports were due by 7:30 AM so that they could be discussed between 8:00 AM (when the police detectives came on duty) and 9:00 AM (when the fire investigators went off duty). Although investigators worked together on occasion and, in fact, operated out of a common office (as they continue to do), there was a relatively sharp division of labor between fire and police investigators. As the unit has matured, however, this situation has changed. In the past, the unit's supervisors observed instances of gaps in communication and of cases "falling through cracks" despite the reporting requirements and the shared office space. Over the past year, the unit has evolved a system in which investigators approach cases as a real team, although each member takes primary responsibility for either the fire scene examination or the follow-up investigation, depending on his background.

In theory, the organizational approaches to arson investigation which involve only <u>one</u> department--the "all-fire" or "all-police" approaches--are less prone to turf conflict and miscommunication than the approaches involving both fire and police departments. Uniform work schedules and record-keeping requirements should mean that there are fewer failures to follow-up on suspects or leads. The most commonly mentioned weakness of this structure is that it cannot take advantage of the differing, yet equally crucial, skills of fire and police investigators. Extensive cross-training--as for example, in Denver, where arson bureau fire investigators attend the full police academy course--may address this weakness. Indeed, Denver's Arson Bureau appears to be a highly skilled and professional unit, in all respects. Nevertheless, it is important to reiterate that matters can "fall through the cracks" in any organization. It is not an organizational structure,

[1] Although the MAST Unit is part of the fire department and operates under a single supervisor, each agency still pays its own staff and operates on its own shift patterns. So far, attempts to resolve the issue of shift differentials have been unsuccessful.

<u>per se</u>, that prevents this from occurring; rather, it is regular monitoring of cases by investigators and supervisors. Such monitoring can be instituted under any organizational scheme, but it appears to be easier to establish and maintain within units based on fire-police teams (with a single supervisor) and units involving but one department than it is under a divided responsibility approach involving separate units with separate supervisors. Therefore, on balance, we are inclined to recommend one of the former two models of organization over the latter.

4.4 Summary

Clearly, one cannot study arson prosecution without looking at the difficult hurdles cases must face before charges are ever filed. Investigative units, faced with the need to operate with limited resources, must set priorities in their caseloads; not all fires can receive an equal level of investigative effort. In some instances, this is because the case is solved almost immediately. In other situations, even an intense investigation would not likely produce witnesses or suspects. Thus, investigative case management practices require that criteria be established to assess which cases should receive additional investigation and which are least likely to be solved and therefore should be dropped without further investigation.

Although determining the cause and origin of the fire is a necessary starting point for any investigation, this portion of an investigation appears to have had little influence on the follow-up investigation. Instead, the follow-up investigation focuses on identifying a suspect and eliciting evidence to link the suspect to the fire, generally considered to be the most difficult aspect of the investigative process. Although it is a common belief that prosecutors are reluctant to accept circumstantial arson cases, investigators appear to have their doubts about them as well. Where linkage looks weak, even though there may be a named suspect, resource allocation decisions by investigators sometimes result in these cases receiving little attention, even to the point where some leads are not explored. Arson-for-profit cases, which place a particularly heavy burden on investigative resources, are especially vulnerable to being bypassed in favor of cases more likely to result in quicker success.

Once cases are selected for follow-up investigation, there must be an ongoing assessment to ensure that the investigative effort continues to be worthwhile. Thus, if leads evaporate or the case loses promise in any other way, the case should be evaluated to determine if the investigation should continue or if the case should be terminated. On the other hand, as an investigation is progressing and producing evidence, evaluation can help to determine when a case is sufficiently developed for presentation to the prosecutor. Depending on local practices, these decisions (to terminate, to continue the investigation or to present for prosecution) can be made by the investigator alone or jointly by an investigator and a prosecutor through informal consultation.

At all decision-making points, the absence of management procedures for periodic review contributes to some cases being overlooked and leads "falling through the cracks." Although this can occur in any investigative structure, more transfer points increase the opportunities for cases to be forgotten. Thus, organizational factors and caseload management strategies must be considered when assessing the effectiveness of the investigative process. The advantages of better communication and easier case monitoring offered by the police-fire team approach and the approaches involving only one department make them preferable, on balance, to divided responsibility models.

As has already been noted, arson cases reaching prosecution have an extremely high conviction rate. However, some investigations do not reach prosecution, either because of deliberate pre-screening at various points in the investigative stage or through oversight. Thus, it is very important to address both the contributing organizational factors and the perceptions of investigators on case strength. Data from this study indicate that investigators may be screening out convictable cases, perhaps, in part, in reaction to anticipated prosecutorial screening decisions. Prosecutorial screening of arson cases is the subject of the next chapter.

5.0 PROSECUTORIAL CASE SCREENING

Chapters 3 and 4 have detailed the substantial attrition that occurs during the investigation stage of arson cases. This attrition results from a combination of factors: the frequent lack of identified suspects, decisions not to pursue cases with some leads but with low perceived solvability, and decisions not to present some developed cases to prosecutors for consideration because of evidentiary weaknesses and perceived likelihood of rejection.[1] In Chapter 3, we presented caseflow statistics from the randomly selected investigation sample showing that while only seven percent of the total sample was accepted for adult prosecution, 76 percent of adult cases presented for prosecution were accepted. Even though the overall rejection rates were quite low, it is important to document the structure and process of prosecutorial screening of arson cases and to analyze the patterns of screening decisions.[2]

Our analyses are designed to illuminate common weaknesses in arson cases presented for prosecution and to suggest structural and procedural mechanisms for developing an effective screening function.

The major findings of this chapter are as follows:

- Prosecutors in all four study sites screen arson cases before filing, although the timing, structure and stringency of the screening varies considerably.
- Centralized/specialized prosecutorial screening of arson cases appears to be the most efficient and effective approach, particularly if it is coupled with specialized or partially specialized prosecution.
- Informal pre-screening consultation between investigators and prosecutors and post-screening feedback from prosecutors to investigators are extremely helpful in strengthening particular cases, setting investigative priorities, and providing ongoing training on the requirements for an acceptable arson case.

---

[1] On investigators' anticipation of prosecutors' reaction to cases, see Barbara Smith, "Pre-Indictment Decisionmaking" (Report submitted to U.S. Department of Justice, National Institute of Justice, n.d.), p. 30n.

[2] In this chapter, we draw on all 113 rejected adult cases in our data set--eight from the investigation sample and 105 from the supplemental sample of declined cases. Together, the 113 cases will be referred to as the "augmented declination sample."

CONTINUED

2 OF 4

- Reflecting the types of evidence generally available in such cases, fraud and vandalism cases accepted for prosecution tend to be more heavily dependent on circumstantial evidence, while spite and pyromania cases tend more often to have direct evidence in the form of an eyewitness or a confession. This finding solidifies the notion that arson is a set of virtually discrete crimes rather than a monolithic crime.
- In general, it takes very strong evidence to get an arson case accepted for prosecution in all four study sites, although Cleveland's prosecutions tended to be much more heavily circumstantial than those in the other three cities.
- Anecdotal evidence suggests that fraud cases may be subjected to more stringent screening standards than other types of arson cases.
- Cleveland's extremely high conviction rate based on a heavily circumstantial caseload suggests that convictions can be obtained in circumstantial arson cases with regularity and that prosecutorial screening in the other three sites may be too conservative.
- Thus, we recommend a more aggressive and venturesome prosecutorial screening stance. This may produce a greater deterrent effect, particularly on fraud arsonists, despite possibly reduced conviction rates.
- As far as their statutes permit, prosecutors should consider potential as well as actual endangerment posed by fires when screening arson cases.
- To reduce as much as possible the subjectivity and inconsistency of arson case screening, more formal and specific criteria for acceptance should be developed.

5.1 An Introduction to Prosecutorial Case Screening

Prosecutorial case screening is one of the least clearly defined and one of the most controversial parts of the criminal justice process. As described in a recent study, prosecutorial screening (also referred to as the charging decision) is not a fixed point in the case but instead a process of interchange between the prosecutor and the police or other investigative agency. This process may vary in duration and involve more or less contact,

depending on the jurisdiction's policies and the complexity of the case at hand.[1] Screening may begin with informal discussion of case merits between investigators and prosecutors and informal solicitation of advice on further investigation required. It ends with the decisions whether or not to accept a case for filing and what specific charges to file.

As McDonald, Rossman and Cramer point out, case screening has traditionally been an area of tension between police and prosecutors.[2] In jurisdictions where prosecutors exercise significant discretion regarding case acceptance, police and investigators often feel that screening is too conservative. The common belief is that prosecutors accept only "open-and-shut" cases, lest they jeopardize their high conviction rates. On the other hand, prosecutors often believe that police make too many arrests on insufficient evidence (in order to improve their case clearance statistics) and thus present too many "garbage" cases. In addition, prosecutors often believe that the police have a tendency to "overcharge" arrestees. This means more work for the prosecutors in winnowing the meritorious charges from those unworthy of prosecution.

Although police-prosecutor tensions over case screening are common in many jurisdictions, it is only recently that prosecutors have begun to play a major screening role. As McDonald, Rossman and Cramer point out, the police traditionally made the charging decisions and in many jurisdictions actually prosecuted the cases as well. As late as 1979, when their research was done, in less than one-third of the 16 surveyed jurisdictions did prosecutors screen cases before they were filed in court.[3] However, another recent study suggests that in the vast majority of jurisdictions (85 percent of 80 jurisdictions surveyed), prosecutors screen cases prior to filing of

---

[1] William F. McDonald, Henry H. Rossman, and James A. Cramer, Police-Prosecutor Relations in the United States: Final Report, (Report submitted to U.S. Department of Justice, National Institute of Law Enforcement and Criminal Justice, 1980), Part III, Chapter 3, p. 3.

[2] Ibid., Part III, Chapter 3, Section 3.5; see also Smith, "Pre-Indictment Decisionmaking," Ch. III.

[3] McDonald, Rossman and Cramer, Police-Prosecutor Relations, Part III, Chapter 3, esp. p. 3.

formal charges in court.[1]

The four sites examined in the present study all vest considerable screening authority, at least theoretically, in the prosecutor. The remainder of this chapter describes and analyzes prosecutorial screening of arson cases in these four jurisdictions.

5.2 The Timing, Structure, and Process of Prosecutorial Screening

5.2.1 Timing and Structure

McDonald, Rossman and Cramer present the following typology of screening models, based on the timing of the prosecutor's earliest intervention in the process: 1) pre-apprehension; 2) pre-booking; 3) "Federal"--all cases are presented to the prosecutor for review before filing in court; 4) "Intermediate"--police file the initial charges in court and present the case to prosecutors three to 10 days later for review and final charging decision; 5) "late"--prosecutor reviews the case several weeks after arrest and preliminary hearing, usually in connection with grand jury presentation; and 6) "colonial"--no prosecutorial involvement in the charging decision.[2] In terms of formal case presentation, three of our four sites (San Diego, Denver, and Cleveland) fall into the "Federal" model, and the fourth study jurisdiction, Bronx County, generally adheres to the "Pre-Apprehension" model (although, because of situational exigencies, not all arson arrests can be screened). However, in all four sites, informal contact between investigators and prosecutors may occur well before the point of formal case presentation or arrest screening.

There are three basic structural models of prosecutorial case screening:

- centralized/specialized: all cases in particular categories (such as arson) are screened by a specially designated attorney/unit with exclusive responsibility for this category of case;
- centralized/non-specialized: all cases in all categories are screened by one centralized screening attorney/unit. Typically this unit will be responsible only for screening/intake; its attorneys will not actually prosecute cases; and
- decentralized/non-specialized: there is basically no centralized screening function, either for special categories of cases or for cases in general.

Of course there are variants and hybrids of these basic models. Indeed, in San Diego, arson case screening is currently handled in what, for want of a better term, can be called a partially-centralized/partially-specialized manner. (This will be described in detail in Section 5.2.3 below.) However, during the period in which our sample cases were being processed, San Diego and the Bronx employed the centralized/specialized model, while Denver used the centralized/non-specialized approach and Cleveland followed the decentralized/non-specialized approach. Figure 5.1 arrays the four study sites according to the timing and structure of their arson case screening functions.

5.2.2 Process

In this subsection we describe, in rough sequence, how the prosecutor becomes involved in case screening. Rather than simply describe seriatim the procedures used in the four sites, we present a composite view of the process drawing on the practices of our study sites. This approach is intended to provide the reader with a better overall view of the possible ways to conduct and employ case screening.

Informal Consultation Prior to Formal Presentation

Informal consultation on cases between investigators and prosecutors may take place under any of the basic models of the timing of formal case screening. Such informal consultation occurred to a greater or lesser degree in all of our study sites. It can be extremely useful to investigators in the case development process. In general, the level of informal contact may be influenced by the structure of the screening function as well as the characteristics of particular cases. Any form of centralized or partially centralized screening, whether specialized by case category or not, leads to recognition and familiarity. This, in turn, facilitates informal discussion

---

[1] Joan Jacoby et al., Policy and Prosecution (U.S. Department of Justice, National Institute of Justice, January 1982), pp. 23-29.

[2] McDonald, Rossman and Cramer, Police-Prosecutor Relations, Part III, Ch. 3, pp. 5-8. Another typology, based largely on the locus of screening authority, is presented in Jacoby, Policy and Prosecution, pp. 24-26. This identifies three "organizational styles": 1) "transfer," in which either the law enforcement authority makes the screening and charging decisions and files the charges or the court determines the appropriate charges; 2) "unit," in which individual assistant prosecutors make screening decisions; and 3) "office," in which there is a centralized intake section in the prosecutor's office.

Figure 5.1

Structure and Timing of Formal Arson Case Screening in the Four Study Sites[a]

STRUCTURE	TIMING[b] Pre-Apprehension	Pre-Booking	Pre-Filing ("Federal")
Centralized/Specialized	Bronx		San Diego[c]
Centralized/Non-Specialized			Denver
Partially Centralized/Partially Specialized			San Diego[d]
Decentralized/Non-Specialized			Cleveland

[a] As noted in the text, informal contact may occur before the designated point of formal intervention in all sites.

[b] These models, defined in the text above, are from McDonald, Rossman and Cramer, Police-Prosecutor Relations in the United States, Part III, Chapter 3, pp. 6-7.

[c] During period of processing the cases in the study sample.

[d] This is the current system, instituted after the study period.

and solicitation of advice. On the other hand, decentralized screening structures tend to inhibit such contact, unless and until investigators do enough "shopping" among prosecutors to develop a few "special" relationships. Once this occurs, informal discussion of cases can take place as easily and as frequently under a decentralized/non-specialized system as under a fully centralized/specialized screening model. For example, in Cleveland, where screening is theoretically decentralized and non-specialized, Police Arson Unit investigators note that they have developed relationships with several "favorite" prosecutors from whom they frequently seek informal advice on arrest warrants, sufficiency of evidence, and other matters. Indeed, our investigation sample data show that prosecutors were involved in investigations prior to formal case presentation in Cleveland more frequently than in the other sites (28 percent of cases).

The Denver District Attorney's Office employs a centralized but non-specialized screening system. All felony cases are screened by the Complaints Division, which is headed by an experienced chief deputy (permanently assigned to the unit) and staffed by three other experienced attorneys who rotate into the division for periods of six months to one year. Investigators in the Denver Arson Bureau frequently discuss cases informally with the Complaints Division before presenting them for formal screening. In practice, this informal discussion is almost always held with the chief deputy in charge of the division, because his office is more convenient to the Arson Bureau's headquarters. This "marriage of convenience" has resulted in frequent, close, and largely cordial contact between arson investigators and the chief of the Complaints Division. On many occasions, investigators come away from these informal discussions with valuable suggestions on what is required to make a case acceptable for filing.

Such discussion can also help investigators to set priorities among their cases and make more effective use of their resources. Consider, for example, the Denver Arson Bureau's investigation of a fire in a wholesale importing store. There were difficulties in establishing with certainty the cause and origin of the fire. The owner admitted his presence at the scene, and there was some reasonably good evidence regarding possible motive (the rent was overdue and the owner was planning to move the business and reduce its size from two stores to one). On the other hand, there had been a recent

series of vandalism incidents at the address, which pointed to another theory of the crime. The case against the owner was a weak circumstantial one at best. When the investigators sought the advice of the Chief Complaint Deputy regarding a polygraph examination of the owner, he advised against it as not worthwhile given the overall weakness of the case. In other words, a negative polygraph examination would not have improved the case appreciably and thus was not considered worth the trouble.

Investigators in San Diego and the Bronx also reported frequent informal discussion of cases with the special arson prosecutors in those cities. Investigation sample data reveal prosecutor involvement in investigations prior to case presentation in 19 percent of cases in the Bronx and nine percent of the cases in San Diego. Of course, as shown by the data from all four sites, prosecutors are involved in any way in only a minority of investigations: 16 percent of all the cases in the investigation sample.

Issuance of Search Warrants or Subpoenas

De facto screening of cases may occur in connection with application for a search warrant or subpoena, and the decision on the application may have a critical effect on the course of the investigation. A Denver case provides a good illustration. This case involved a $30,000 restaurant fire discovered at 2:00 AM. There was evidence of flammable pours and there were unusually low stocks of food on hand. The restaurant was doing poorly and the owner had been late making mortgage payments. The scene examination revealed no sign of forced entry, and the investigators concluded that entrance had to have been gained by key. The investigators tried to obtain the restaurant's financial records and lists of persons with keys to the premises. Since the owner's attorney refused to provide these records, the investigators sought a search warrant from the district attorney's chief complaints deputy. The request was denied for lack of probable cause. This points up a problem which is particularly troublesome in Denver and other jurisdictions with tight restrictions on issuance of warrants and subpoenas. If the investigator needs probable cause to secure a warrant but the records sought through the warrant are needed to establish probable cause, an insoluble dilemma is created. The chief complaints deputy, in denying the warrant, suggested that the investigators pursue the only other course: presentation

of the case to the grand jury so that a subpoena could be obtained (under Colorado law, only grand juries can issue subpoenas). But the district attorney's office also declined to present the case to the grand jury. Judges in Denver resist using the grand jury to obtain subpoenas unless this is part of an ongoing grand jury investigation with a reasonable likelihood of producing indictments. The office did not consider this case likely to result in grand jury indictments. Here, an impasse was reached similar to that concerning the search warrant. Records that might have shed important light on the case could not be obtained, and the investigation was, according to the Arson Bureau, "stopped cold." As it turned out, the insurance company paid $18,000 on the property loss claim and $326 per day for business interruption.

Pre-Apprehension Screening

In the Bronx County District Attorney's Office, it is the policy of the Arson/Economic Crime Bureau to screen all arrests for sufficiency of evidence. However, particular situations may dictate making an arrest without the possibility of clearing it in advance with the Arson/Economic Crime Bureau. Indeed, arrests are often made at fire scenes by precinct patrolmen, Housing Authority Police, or even by fire marshals, before the Police Arson and Explosion Unit has even been called into the case. Such arrests cannot be screened by an arson prosecutor. However, an attorney from the District Attorney's Arson/Economic Crime Bureau is on call 24 hours per day. If it was not possible to screen the arrest, the bureau is notified after the arrest has occurred and, on the basis of the available evidence, the bureau chief or on-duty attorney either approves the arrest or recommends that the suspect be released. Thus, the bureau reviews all cases either before or very shortly after arrest. In effect, this review by the Arson/Economic Crime Bureau constitutes the formal prosecutorial screening of the case. However, all cases must be presented to the District Attorney's Felony Screening Unit and formally referred to the Arson/Economic Crime Bureau. Since almost all of the cases will already have been screened by the bureau, this is largely a formality.

Pre-Booking Intervention

As described in Chapter 4, pre-booking intervention by prosecutors may facilitate development of fraud arson cases. When a "torch" is apprehended at the scene or soon after the fire in a suspected arson-for-profit case, the Bronx District Attorney's Arson/Economic Crime Bureau and the Police Arson and Explosion Unit follow a standard investigative strategy: to avoid formal booking of the suspected "torch" so that he can be "worked" to provide evidence against his client. Formal booking might tip off the torch's client and would start the clock on time limits (to arraignment and indictment) that might constrain the investigation. Thus, on the advice of the arson prosecutor, the police typically detain the suspected torch and question him with the informal "understanding" that he will receive lenient treatment if he cooperates.

Cases of this kind underscore the importance in the successful development of arson-for-profit cases of early and close cooperation between investigators and prosecutors--especially in delaying formal arrest and booking of suspected torches.

Pre-Filing (the "Federal Model" of Prosecutorial Screening)

In three of the four study sites--Denver, San Diego, and Cleveland--formal case screening occurs after the case has been fully developed by investigators but before filing of any formal charges in court. In practice, this screening can occur before or after arrest of the suspect. Denver Arson Bureau investigators typically work a case until they are "pretty sure of it," then present it to the chief complaints deputy (or other complaints division deputy) for screening. As noted above, there may be informal discussions with the prosecutor earlier in the investigation. After screening, the Complaints Division furnishes the investigator with a standard case filing form noting tentative acceptance, rejection with resubmission recommended (with additional information/evidence required) or outright rejection (with reasons). While the reasons for declination noted on the form may be quite vague (e.g., insufficient evidence), a more complete and detailed rationale for the rejection is usually provided orally to the investigator.

In San Diego during the study period, the district attorney's policy was that the designated arson prosecutor screen all arson cases presented by the city's Metro Arson Strike Team, the county sheriff's Arson and Explosion

Unit, other police and fire departments in the county[1] and state investigative agencies. The arson prosecutor provided investigators with a "complaint request evaluation" (similar to the case filing form used in Denver) noting acceptance or rejection. Reasons for rejection were often detailed at considerable length.

As indicated earlier, the system has changed in San Diego since the study period. There is no longer a single deputy district attorney assigned exclusively to arson cases; instead, there is a designated arson prosecutor but he handles other types of cases as well. In order to reduce his case-screening burden and still capture the arson cases he considers worth specialized vertical prosecution, he has promulgated a list of criteria for cases to be brought to him for screening. These criteria are as follows:

1) Arson-for-profit (i.e., insurance fraud);
2) Circumstantial cases requiring complicated expert testimony on fire cause-and-origin;
3) High dollar loss arson cases (in excess of $50,000);
4) Series of arson cases (i.e. "firebug" cases);
5) Arson cases involving death or serious bodily injury; and
6) Explosion cases.

Cases meeting none of these criteria are presented to the office's regular "Issuing Section" and prosecuted like other felony cases--that is, without specialization.

The current arson prosecutor feels strongly that focusing specialized arson case screening on a smaller set of potential prosecutions results in the most realistic screening process: one in which the attorney who accepts the case also prosecutes it and thus must live with the decision. This, he argues, tends to discourage acceptance of weak cases. On the other hand, one might counter that it could result in overly conservative screening decisions with only the very strongest cases accepted.

---

[1] Some cases developed by other police and fire departments were presented to the district attorney's branch offices and never screened by the arson prosecutor, despite instructions that all arson cases be forwarded to his attention.

Moreover, there are several other potential problems with the partially specialized arson case screening system. First, it depends on the investigators to determine whether a case meets the criteria for presentation. Although the criteria are largely clear and objective, there is room for interpretation in some of them--particularly the criterion: "circumstantial cases involving complicated expert testimony on fire cause-and-origin." Most arson cases involve some expert evidence on fire cause, and the point at which such evidence moves from the simple to the complex is subject to differing interpretations. It is possible that an investigator might believe a case did not meet this criterion even though it presented complex technical issues. Thus, a case which might really have benefitted from special handling might not receive it.

A second potential problem with the new system is that without fully centralized and specialized screening it might be more difficult to identify and track the potential serious firesetter who initially sets only minor fires. Investigators might, and arguably <u>should</u>, perform this tracking function. But the former San Diego arson prosecutor felt strongly that fully centralized prosecutorial case screening was crucial to this purpose as well.

In Cuyahoga County (Cleveland), screening ostensibly occurs in two ways:

1) in the vast majority of cases, an arrest is made and the case is presented to the <u>police prosecutors</u> (a division of the city attorney's office); the police prosecutor conducts preliminary hearings on felony cases and tries misdemeanors. Felonies bound over at the preliminary hearing are transferred to the county prosecuting attorney's office for presentation to the grand jury and prosecution.

2) "grand jury originals," a small minority of cases, are presented directly to the county prosecuting attorney's office which, in turn, presents them to the grand jury.

In practice, the declinations that occur under the first scenario are generally the result of very obvious case deficiencies of which the investigator is well aware, such as lack of cooperation from the victim or key witness. Thus, screening by the police prosecutor in Cleveland appears to be a somewhat artificial process in which investigators present obviously deficient cases <u>in order to get them rejected</u> and cleared from their books.

The county prosecutor's screening role is severely limited by established procedure. Once the police prosecutor accepts a case and it is bound over at the preliminary hearing, the county prosecutor <u>must</u> accept it <u>as is</u>, for presentation to the grand jury. Most potential "grand jury originals" are discussed informally with the county prosecutor's office in advance of formal presentation, so rejections are rare under the second screening scenario.

<u>Feedback to Investigators on Presented Cases</u>

Feedback on presented cases can be useful to investigators in strengthening particular cases as well as in solidifying their general understanding of what it takes to make an acceptable arson case. Indeed, investigators in Denver's Arson Bureau take an interesting and constructive view of the whole process of prosecutorial screening: they view it as a way to get advice and assistance on case development from the district attorney's office.

As already noted, the arson prosecutor in San Diego and the Complaints Division in Denver provide investigators with a written report of their screening of a case, including reasons for rejection. In Denver, the reasons might be quite brief and vague in writing, but supplemented with details provided orally. In San Diego, reasons for rejection are often detailed in writing. Perhaps because the reasons for rejection in Cleveland are normally so obvious, there appear to be no established procedures for providing investigators with written feedback on them.

<u>Charging Decisions</u>

Whether or not to accept a case for prosecution <u>at all</u> is only part of the screening process; just as crucial is the decision as to the exact charges to be filed. Charging decisions in arson cases are often quite complex and require rather subtle distinctions regarding, for example, the defendant's state of mind, the category of damage caused by a fire, or the degree of actual or potential endangerment resulting from an arson. While it is true that charging decisions are complex in many crime categories, it appears that they may be more complex and technical in arson cases. This constitutes a strong argument for centralized/specialized (or at least centralized/non-specialized) screening.

Other Uses of the Screening Process: "Preventive Prosecution"

The former arson prosecutor in San Diego developed an innovative use of the screening process regarding certain rejected arson-for-profit cases. If the evidence in an alleged insurance fraud arson case was insufficient for issuance but he believed that the suspect was involved in the arson and intent on defrauding the insurance company, he would hold the case and let it "perk," rather than rejecting it outright. He would let it be known that the case was under consideration and that the office was simply waiting for the suspect to file an insurance claim (thus consummating the fraud) before issuing the case either for arson of property with intent to defraud or for filing a false or fraudulent insurance claim. This attorney believes that his strategy discouraged the filing of arson-related insurance claims in a number of cases. Although the arsonist could not be successfully prosecuted in these cases, at least he was prevented from realizing his profit.

5.3 Screening Standards and Screening Patterns

5.3.1 Screening Standards

As many commentators have pointed out, prosecutorial screening standards are often highly subjective. On the theory that standards ought to aim at more objective case screening, which focuses limited prosecutorial resources on the most worthy cases, many jurisdictions have moved to more specific, and more stringent standards. According to a recent study, many jurisdictions have adopted screening standards above probable cause and many employ some form of "convictability" standard.[1]

Despite the efforts to make them more objective, screening standards are still often elusive and difficult to define.[2] In three of our four

[1] McDonald, Rossman and Cramer, Police-Prosecutor Relations, Part III, Chapter 3, p. 16.

[2] At the same time, Jacoby found an "overwhelming" consistency among jurisdictions in the criteria used in screening cases--evidentiary strength and seriousness of the offense--and in the screening decisions reached by surveyed prosecutors asked to consider a "standard case set." The consistency in individual decisions existed both between supervisors and assistant prosecutors and among assistant prosecutors. Joan Jacoby et al., Prosecutorial Decisionmaking: A National Study (U.S. Department of Justice, National Institute of Justice, January 1982), pp. 24-25, 59-69.

sites (the Bronx, Denver, and Cleveland), there do not appear to be anything beyond fairly general standards for screening arson cases. The Bronx's Arson/Economic Crime Bureau has no written screening guidelines. The bureau chief suggests that "experience" dictates his decisions, but notes that he generally judges cases on a convictability standard. Denver's Complaints Division has no written screening guidelines for any category of case. The chief complaints deputy states that his decisions are usually "gut reactions" based on long experience. However, the general criterion for acceptance is "reasonable likelihood of conviction."

San Diego was the only jurisdiction in our study which used specific arson case screening guidelines. According to the former arson prosecutor in San Diego, he only accepted cases with strong evidence in all of the following areas:

1) incendiary origin of the fire;
2) arson motive; and
3) linkage of the defendant to the fire or false/inconsistent statements by the defendant.

Despite the availability of specific criteria, case-by-case screening is often highly subjective. The prosecutor can examine objectively (as we did in this study) the presence and absence of certain types of evidence; but the final screening decision also must be based on an assessment of the strength and quality of the evidence that is present. The following sections examine actual arson case screening decisions in our four study sites to determine if any meaningful patterns exist across jurisdictions or across arson motive categories.

5.3.2 Screening Patterns: Overview

Patterns of prosecutorial case screening cannot be examined in isolation. It cannot be concluded that one jurisdiction has more stringent screening standards than another jurisdiction solely on the basis of information that the former jurisdiction rejects a larger percentage of presented cases than does the latter jurisdiction. One must consider, as well, the relative fractions of cases with suspects that are presented for prosecution in the two jurisdictions and the relative strength of the presented cases across the jurisdictions. Because of the impossibility of quantifying

evidentiary strength and because of the interrelationships of prosecutorial screening patterns and the patterns of other case processing stages, we consider it perilous to offer any conclusive ranking of the stringency of arson case screening in our four study jurisdictions. Instead, we will describe the patterns of case screening decisions in the jurisdictions in terms of the characteristics of cases that are accepted and rejected, across the sites and across arson motive categories. Included in these descriptions is anecdotal and other qualitative information which suggests stringency and/or inconsistency in screening decisions. We will conclude with a composite view of the criteria (in terms of evidence types and case characteristics) that can be used to screen arson cases and the issues involved in assessing the strength and quality of these types of evidence.

In general, it appears that it takes a very strong arson case--typically with either a confession, an eyewitness, or evidence of opportunity--to be accepted for prosecution in any of the four jurisdictions under study. This is consistent with the high conviction rates found in all four sites. Table 5.1 compares the percentages of accepted cases (from the augmented prosecution sample) and rejected cases (from the augmented declination sample) with certain key types of evidence. The table combines all four sites. The percentages refer only to presence of evidence types and not to the quality of that evidence, but they show that the vast majority of accepted cases possessed the key elements of a strong circumstantial case--evidence of incendiary origin, motive, and opportunity--and that 61 percent of the accepted cases included direct evidence of the suspect's or defendant's commission of arson, in the form of a confession or eyewitness testimony. At the same time, while a minority of the rejected cases had direct evidence (31 percent), solid majorities of them possessed the elements of a circumstantial case. This suggests that, based on presence of evidentiary elements, the cases presented for prosecution--whether ultimately accepted or rejected--were generally quite strong. Indeed, it may be an indication that prosecutorial screening of cases is too conservative; that is, that a substantial number of convictable cases may be rejected.

A further perspective on the character of accepted and rejected cases is afforded by considering the presence of evidence combinations. Table 5.2 suggests that, although direct evidence and evidence of opportunity are the most important evidentiary categories for screening purposes, combinations of circumstantial evidence elements can be important as well. For example,

Table 5.1

Accepted Cases (Augmented Prosecution Sample) and Rejected Cases (Augmented Declination Sample) by Key Evidence Types Present

Evidence Type	Percent of Augmented Prosecution Sample with Evidence Present (n=408)	Percent of Augmented Declination Sample with Evidence Present (n=113)
1. Evidence of Incendiary Origin[a]	78	65
2. Evidence of Motive[b]	75	66
3. Evidence of Opportunity[c]	91	63
a) Suspect/Defendant seen entering/leaving scene[d]	80	58
4. Direct evidence of suspect's/defendant's commission of arson[e]	61	31
a) Eyewitness to commission of arson[f]	28	20
b) Confession[f]	43	13

[a] This variable was coded positively if any of the following evidence was present: laboratory analysis indicating the presence of an accelerant; firefighter observations of fire characteristics suggesting arson; expert testimony on multiple origins, burn patterns, trailers, ignition devices, or presence of accelerants; physical evidence such as ignition devices, matches, accelerant containers, or fire debris; or testimonial evidence from non-expert witnesses regarding the presence of ignition devices or accelerants.

[b] This variable was coded positively if any of the following evidence was present: financial, property or insurance records indicating a possible fraud motive; accomplice statements regarding motive; testimony concerning defendant/suspect threatening or quarreling with the victim; or other motive-related testimony.

[c] This variable was coded positively if any of the following evidence was available, which linked the defendant/suspect to the scene or contributed to establishing opportunity or presence: fingerprints; physical evidence such as clothing of the defendant/suspect; statements or admissions by the defendant/suspect as to opportunity; witnesses to the defendant/suspect entering or leaving the scene close to the time of the fire; witnesses to the defendant/suspect in possession of accelerant; or witness identification of defendant's/suspect's vehicle.

[d] This is a sub-category of "opportunity" evidence.

[e] This variable was coded positively if any of the following direct evidence of the defendant's/suspect's actual commission of arson was present: confession; statements by accomplices; or eyewitness to the commission of arson.

[f] These are sub-categories of "direct" evidence.

Table 5.2

Accepted Cases (Augmented Prosecution Sample) and Rejected Cases (Augmented Declination Sample) by Evidence Combination/Type Present

Evidence Type[a]	Percent of Augmented Prosecution Sample With Evidence Present (n=408)	Percent of Augmented Declination Sample With Evidence Present (n=113)
1. Direct evidence of Suspect's/Defendant's Commission of arson	61	31
2. No Direct Evidence/All of the following: Evidence of Incendiary Origin, Motive, and Opportunity	17	18
3. No Direct Evidence/No Motive Evidence/Both of the following: Evidence of Incendiary Origin and Opportunity	9	12
4. No Direct Evidence/No Opportunity Evidence/Both of the following: Evidence of Incendiary Origin and Motive	3	17
5. No Direct Evidence/No Evidence of Incendiary Origin/Both of the following: Evidence of motive and opportunity	5	5
6. No Direct Evidence/One of the following: Evidence of Incendiary Origin, Motive, or Opportunity	5	12
7. None of the following: Direct Evidence; Evidence of Incendiary Origin, Motive, or Opportunity	0	5
TOTAL	100	100

[a]For definitions of evidence types, see Table 5.1, notes a-f.

cases with direct evidence made up 61 percent of the augmented prosecution sample (as opposed to 31 percent of the augmented declination sample), but the next largest category (17 percent of accepted cases) was that of cases without direct evidence but with all three of the most important ingredients of a circumstantial case: evidence of incendiary origin, motive, and opportunity. The case categories with only two of the three key evidence types contributed small proportions of the accepted cases--but the categories which included opportunity evidence contributed larger percentages than those lacking opportunity evidence. The relative importance of opportunity evidence seems confirmed by the contrast between the percentages of the accepted and rejected cases in evidence category 4 which lacks opportunity evidence (3 percent to 17 percent). The other case categories involving combinations of circumstantial evidence (2, 3, and 5) contributed more equal shares of the accepted and rejected cases, suggesting that screening decisions on these cases were less clear-cut than decisions in cases lacking opportunity evidence.

A final perspective on the evidentiary characteristics of accepted and rejected cases focuses on defendants/suspects who are alleged to have actually set the fire, as opposed to hiring someone else to set the fire. Table 5.3 shows that 63 percent of the prosecuted cases in this group included direct evidence linking the defendant to the actual commission of the arson, while 37 percent of the prosecuted cases were entirely circumstantial. The corresponding breakdown among rejected cases was 31 percent to 69 percent. Table 5.3 also reveals that 98 percent of the prosecuted cases included at least evidence of the defendant's opportunity to commit the arson (case categories 1 and 2: direct or circumstantial linkage of the defendant to actual commission of the arson), while only two percent of the prosecuted cases lacked such evidence (category 3: no linkage of the defendant to actual commission of the crime). Sixty-nine percent of the rejected cases included at least evidence of opportunity (direct or circumstantial linkage), again suggesting the overall strength of the cases presented for prosecution and the apparent conservatism of screening decisions.

Obviously, consideration of the evidentiary elements present is only one part of the screening process; the other is assessment of the quality of the available evidence. A critical aspect of evidentiary quality is having witnesses who are cooperative, available to testify, and whose testimony is considered reliable and credible. Witness problems (including lack of

Table 5.3

Accepted Cases (Augmented Prosecution Sample) and Rejected Cases (Augmented Declination Sample) in which a Suspect/Defendant was Alleged to have Actually Set a Fire,[a] by Nature of Evidence Linking Suspect/Defendant to Commission of Arson

Case Category	Nature of Evidence[b]	Percent of Augmented Prosecution Sample with Evidence Present (n=393)	Percent of Augmented Declination Sample with Evidence Present (n=112)
1. Direct Linkage of Suspect/Defendant to Arson	Direct evidence of suspect's/defendant's commission of arson[a]	63	31
2. Circumstantial Linkage of Suspect/Defendant to Arson	Evidence of opportunity[b]/No direct evidence of suspect's/defendant's commission of arson	35	39
3. No Linkage of Suspect/Defendant to Arson	No evidence of opportunity/No direct evidence of suspect's/defendant's commission of arson	2	30
	TOTAL	100	100

[a] i.e. excludes cases in which the suspect/defendant was accused of hiring someone else to set the fire.

[b] For definitions of evidence types, see Table 5.1, notes c and e.

cooperation, unavailability, and unreliability) played an important role in declinations. Thirty-seven percent of the declined cases suffered from such problems, compared to only 12 percent of the prosecuted cases.

It should be emphasized that not all case rejections result from evidentiary problems. Table 5.4 shows the breakdown of rejection reasons. While the majority were the result of insufficient evidence, other reasons--victim's refusal to prosecute, referrals for other prosecution, and the mental condition of the suspect also figured in rejections of cases.

5.3.3 Screening Patterns by Site

Cleveland's prosecuted cases were much more heavily dependent on circumstantial evidence than those in the other three study sites. Tables 5.5, 5.6 and 5.7 present breakdowns, by site, of the key evidentiary characteristics of accepted and rejected cases and the mix of direct and circumstantial cases. Among prosecuted cases with a defendant accused of actually setting a fire in the Bronx, Denver, and San Diego, the ratio of cases with direct linkage evidence to cases with circumstantial linkage evidence was better than 60-40, while in Cleveland this ratio was 44-56 (Table 5.7).

In general, site breakdowns show that, in terms of evidence types available, San Diego's accepted cases were the strongest. Table 5.5 shows that San Diego led the four sites in percentages of prosecuted cases exhibiting evidence of incendiary origin, motive, opportunity, and direct evidence of the defendant's commission of arson. Seventy-five percent of San Diego's presented cases had direct evidence of the defendant's commission of arson--indeed, 64 percent of the cases had confessions. In 98 percent of San Diego's prosecuted cases with a defendant accused of actually setting a fire, there was at least evidence of defendant opportunity (Table 5.7). Table 5.6 shows that 82 percent of San Diego's prosecutions either had direct evidence of the defendant's commission of arson or all three key elements of a circumstantial case: evidence of incendiary origin, motive, and opportunity. This was the highest combined percentage among the four sites.

San Diego's rejected cases appear to be strong in evidence of incendiary origin of fires and in circumstantial evidence linking the suspect to the fire (motive and opportunity). Indeed, San Diego's rejected cases led all other sites' prosecuted cases in the first three evidence categories.

Table 5.4

Reasons for Case Rejections, Augmented Declination Sample

Reason	Number	Percent
Insufficient Evidence	58	51
Victim Refused to Prosecute	28	25
Mental Condition of Suspect	8	7
Referred for Other Prosecution	8	7
Other Reason	9	8
No Reason Given	2	2
Total	113	100

Table 5.5

Accepted Cases (Augmented Prosecution Sample) and Rejected Cases (Augmented Declination Sample), by Key Evidence Types Present, by Site

Evidence Type[a]	Percent of Augmented Prosecution Sample (P) and Augmented Declination Sample (D) with Evidence Present							
	Bronx		Denver		San Diego		Cleveland	
	P (n=104)	D (n=6)	P (n=101)	D (n=37)	P (n=100)	D (n=30)	P (n=103)	D (n=40)
1. Evidence of Incendiary Origin	62	67	79	73	96	87	76	43
2. Evidence of Motive	75	67	71	62	89	90	65	53
3. Evidence of Opportunity	85	100	91	65	98	93	90	33
a) Suspect/Defendant seen entering/leaving scene	78	83	83	57	80	90	78	33
4. Direct Evidence of Suspect's/Defendant's Commission of Arson	65	50	61	24	75	33	42	33
a) Eyewitness to commission of arson	34	17	26	11	34	20	19	30
b) Confession	41	33	40	19	64	17	27	3

[a] For definitions, see Table 5.1, notes a-f.

Table 5.6

Accepted Cases (Augmented Prosecution Sample) and Rejected Cases (Augmented Declination Sample) by Evidence Combination/Type Present, by Site

Evidence Type[a]	Percent of Augmented Prosecution Sample (P) and Augmented Declination Sample (D) with Evidence Present							
	Bronx		Denver		San Diego		Cleveland	
	P (n=104)	D (n=6)	P (n=101)	D (n=37)	P (n=100)	D (n=30)	P (n=103)	D (n=40)
1. Direct evidence of Suspect's/Defendant's Commission of arson	65	50	61	24	75	33	42	33
2. No Direct Evidence/All of the following: Evidence of Incendiary Origin, Motive, and Opportunity	11	0	17	14	17	47	21	3
3. No Direct Evidence/No Motive Evidence/Both of the following: Evidence of Incendiary Origin and Opportunity	5	33	11	19	4	10	17	5
4. No Direct Evidence/No Opportunity Evidence/Both of the following: Evidence of Incendiary Origin and Motive	2	0	3	22	1	3	7	25
5. No Direct Evidence/No Evidence of Incendiary Origin/Both of the following: Evidence of motive and opportunity	10	17	5	5	1	4	5	5
6. No Direct Evidence/One of the following: Evidence of Incendiary Origin, Motive, or Opportunity	7	0	3	16	2	3	8	17
7. None of the following: Direct Evidence; Evidence of Incendiary Origin, Motive, or Opportunity	0	0	0	0	0	0	0	12
TOTAL	100	100	100	100	100	100	100	100

[a]For definitions of evidence types, see Table 5.1, notes a-f.

Table 5.7

Accepted Cases (Augmented Prosecution Sample) and Rejected Cases (Augmented Declination Sample) in which a Suspect/Defendant was Alleged to Have Actually Set a Fire,[a] by Nature of Evidence Linking Suspect/Defendant to Commission of Arson, by Site

Case Category	Nature of Evidence[b]	Percent of Augmented Prosecution Sample (P) and Augmented Declination Sample (D) With Evidence Present							
		Bronx		Denver		San Diego		Cleveland	
		P (n=95)	D (n=5)	P (n=100)	D (n=37)	P (n=100)	D (n=30)	P (n=98)	D (n=40)
1. Direct Linkage	Direct Evidence of Suspect's/Defendant's Commission of Arson	70	40	62	24	75	33	44	32
2. Circumstantial Linkage	Evidence of Opportunity/No Direct Evidence of Suspect's/Defendant's Commission of Arson	30	60	35	43	23	60	54	18
3. No Linkage	No Evidence of Opportunity/No Direct Evidence of Suspect's/Defendant's Commission of Arson	0	0	3	33	2	7	2	50
	TOTAL	100	100	100	100	100	100	100	100

[a] i.e., excludes cases in which defendant/suspect hired someone else to set the fire.

[b] For definitions of evidence types, see Table 5.1, Notes c and e.

The strong circumstantial nature of San Diego's rejected cases is revealed by comparing the combined percentages in categories 1 and 2 of Table 5.6 (cases with direct evidence and cases with all three key elements of a circumstantial case: evidence of incendiary origin, motive, and opportunity) for accepted and rejected cases. The combined percentages for the accepted cases was 92 percent while for the rejected cases it was a fairly close 80 percent.

The difference between the accepted and rejected cases lies in the incidence of direct evidence. Only one-third of San Diego's rejected cases exhibited direct evidence of the suspect's commission of arson (as opposed to 75 percent of accepted cases), but this was close to the figure across all four jurisdictions. The wide discrepancy in San Diego between the percentage of accepted cases with direct evidence and the percentage of rejected cases with direct evidence (the widest such discrepancy among the study jurisdictions) indicates that this was a particularly important screening criterion.

As described above, San Diego was the only one of our four sites that employed specific arson case screening criteria. It appears that these demanding criteria were quite exactingly applied. Indeed, the data suggest that screening standards may actually have been stricter than the formally established criteria. Obviously, as noted above, screening decisions are based on the quality of available evidence, while our data reveal only what evidence types were present. However, it would appear that at least some of the rejected cases in category 2 of Table 5.6 should have met the established criteria for acceptance.

Denver's arson case acceptance standards, although unwritten, also appear to be quite high. This is consistent with Denver's general standard for case acceptance: reasonable likelihood of conviction. Table 5.5 shows that particular strengths among Denver's prosecuted cases are evidence of incendiary origin (79 percent) and defendant's opportunity to commit the arson (91 percent). Table 5.6 shows that 78 percent of Denver's prosecuted cases had either direct evidence of commission of arson or all three key elements of a circumstantial case. In 62 percent of Denver's prosecuted cases with a defendant accused of actually setting a fire, there was direct evidence of the defendant's commission of arson and 97 percent of these cases included at least evidence of opportunity (Table 5.7).

There are occasional inconsistencies in screening decisions by the Complaints Division in the Denver District Attorney's Office. In particular,

screening of arson-for-profit cases appears to be very stringent, while spite cases seem to be judged by more lenient standards. Some seemingly impressive circumstantial fraud cases have been declined, while some rather weak circumstantial spite cases have been accepted, only to be dismissed at a later date. Indeed, Denver's post-filing dismissal rate is also the highest among the four study jurisdictions.

Denver's rejected cases appear weaker in some respects than those of the other sites, particularly in evidence of opportunity and direct evidence of the suspect's commission of arson (Table 5.5). Table 5.6 shows that only a combined 38 percent of Denver's rejected cases possessed direct evidence or all three key circumstantial elements. Most interesting is the fact that one-third of Denver's rejected cases in which a suspect was alleged to have actually set a fire revealed no evidence linking the defendant to commission of the arson (Table 5.7).

There is an explanation for the comparative weakness of cases presented for prosecution in Denver: as has already been noted, Denver's Arson Bureau presents a larger percentage of its cases for screening than do investigators in our other sites. Indeed, the Arson Bureau uses screening as a way to obtain information and advice on case development. Thus, investigators will often present cases that they know are not fully acceptable. This practice is also reflected in Denver's rejection rate (47 percent of adult cases presented), which is the highest among the four sites.

The chief of the Bronx District Attorney's Arson/Economic Crime Bureau describes his arson screening standards as very stringent, and the supervisor of the police's Arson and Explosion Unit agrees. Seventy percent of the sampled prosecuted cases in the Bronx in which a defendant was accused of actually setting a fire included direct evidence of the defendant's commission of the arson, and all cases had at least evidence of opportunity (Table 5.7). Although our sample of declined cases from the Bronx is very small (six cases), they also appear quite strong, particularly in direct evidence of the suspect's commission of arson and evidence of opportunity to commit the offense. These characteristics seem to reflect the arson prosecutor's stringent screening standards. (An example of his rejection of an apparently very strong circumstantial case is offered below, in Section 5.4.)

A major factor in the stringency of arson case screening in the Bronx is the Arson/Economic Crime Bureau's policy that, as far as possible, all arrests be screened. On the other hand, arrests that cannot be screened because of exigent circumstances, or because they were made by precinct patrolmen or housing authority police unaware of the office's policy, sometimes result in rather weak cases. (Several examples are provided in Section 5.4, below.) However, the Arson/Economic Crime Bureau prefers to accept these cases anyway and "give them our best shot" at trial rather than decline them at the outset or dismiss them soon after filing. Since many of these weak cases end in acquittals, it may be argued that their acceptance does not represent an efficient screening policy.

As already noted, Cleveland appears to be unique among our study sites in the fraction of its accepted arson cases which rely entirely on circumstantial evidence. Table 5.5 shows that the proportion of Cleveland's prosecuted cases with evidence of incendiary origin and the defendant's opportunity to commit the arson were in the same range as those of the other three sites. The percentage of Cleveland cases with motive evidence was slightly lower than those of the other three jurisdictions. However, the most dramatic difference is in the percentage of Cleveland's prosecuted cases with direct evidence of the defendant's commission of arson: only 42 percent, 19 percent lower than the next lowest site. Table 5.6 shows that 63 percent of Cleveland's prosecuted cases had either direct evidence of commission of arson or all three key elements of a circumstantial case; this is 13 percent lower than the next lowest site. However, examination of the two parts of this figure show that Cleveland's small percentage of prosecuted cases with direct evidence of commission of arson is balanced by the highest percentage among all sites of prosecuted cases with all three key elements of circumstantial evidence (21 percent). Focusing on Cleveland's prosecuted cases with defendants accused of actually setting a fire reveals similar patterns: the smallest percentage among all sites of cases with direct evidence but the largest percentage of cases with circumstantial linkage of the defendant to the arson (Table 5.7).

Table 5.5 shows that Cleveland's rejected cases also appear to be the weakest among the four sites. Cleveland's rejections include the smallest percentages of cases with every evidence type. Table 5.6 reveals that

Cleveland has the smallest combined percentage of rejected cases in categories 1 and 2 (36 percent) and that relatively large percentages of the rejected cases fall into the weaker circumstantial categories (e.g. category 4: evidence of incendiary origin and motive but no direct evidence or evidence of opportunity; and category 6: no direct evidence and but one key circumstantial element). Finally, Table 5.7 shows that fully one-half of Cleveland's rejected cases in which a suspect was alleged to have actually set a fire had no evidence linking the suspect to commission of the arson, the highest rate among the four sites (Table 5.7).

The relative weaknesses of both the accepted and rejected cases in Cleveland suggest that neither prosecutorial screening nor investigative pre-screening are particularly stringent. The data seem to confirm the finding offered in Chapter 4 that once a case is assigned for followup investigation, a suspect is developed, and the investigation is completed, the case will be presented for prosecution--almost regardless of its strength. Indeed, many of the rejected cases are presented with the expectation that they will be rejected. In this way, the Police Arson Unit can clear them from their books. These cases often have very clear-cut weaknesses. Thirty-four of the forty Cleveland declinations (85 percent) in cases with a suspect alleged to have actually set a fire either had no evidence linking the defendant to the arson (9 cases), a victim who refused to prosecute and testify (14 cases), or both (11 cases).

Cleveland had the highest rate of witness problems (lack of cooperation, unreliability, unavailability) among rejected cases (58 percent) of all four jurisdictions. Another factor of some importance in Cleveland may be dollar-loss resulting from the fire. Cleveland exhibits the widest discrepancy between percentages of accepted and rejected cases in which total dollar-loss was $5,000 or less (63 percent to 83 percent). This suggests that some cases may be rejected because they involved only minor fires.

In sum, the vast majority of the Cleveland rejections appear almost pro forma in character--based on obvious evidentiary problems or case characteristics such as dollar loss. The other side of this is that only rarely are strong circumstantial cases rejected. Table 5.6 shows that only three percent of the rejections were of cases with all three key elements of a circumstantial arson case. Whether because of the evidentiary nature of the

cases available or more lenient screening standards, or both, Cleveland's prosecutors do seem to accept more purely circumstantial cases than do prosecutors in the other sites.

The relative leniency of investigative pre-screening in Cleveland is in part the result of investigators' knowledge that prosecutors do not screen cases very stringently. However, it is important to emphasize that Cleveland's apparently lenient case screening did not seem to reduce conviction rates; indeed, Cleveland's prosecution sample conviction rate (83 percent) was the highest among the four sites. This suggests that the Cuyahoga County Prosecuting Attorney's Office is extremely competent in arson cases, despite the office's non-specialized/horizontal structure of prosecution and the comparatively weaker arson cases that its attorneys are prosecuting. In a general sense, this is an important conclusion because it suggests the high conviction rates can be achieved in arson caseloads composed primarily of circumstantial cases. It also suggests that the screening standards used in the other three sites may be too stringent.

5.3.4 Screening Patterns by Motive

The most striking variation in the evidentiary patterns of accepted and rejected cases across motives is the predominance of circumstantial cases in the fraud and vandalism categories and cases with direct evidence in the pyromania and spite categories. In fact, these variations are not surprising: they reflect differences in the types of evidence normally available in arsons with different motives. These differences tend to solidify the notion that arson is better understood as a set of different crimes with differing investigative and prosecutorial requirements than as a monolithic crime.

Tables 5.8, 5.9, and 5.10 depict the comparative evidentiary patterns for accepted and rejected cases in the four major motive categories: fraud, pyromania, spite, and vandalism. As shown in Table 5.8, fraud cases accepted for prosecution are generally weaker than cases in other motive categories, in terms of evidence linking the defendant to actual commission of the crime: opportunity (62 percent), eyewitness to commission of arson (8 percent), and confession (35 percent). This is probably due in part to the greater difficulty of obtaining linkage evidence in fraud cases because of the greater skill of the arsonists. However, these low percentages are also explained in

part by the fact that arson-for-hire is more prevalent in fraud cases; that is, some defendants in fraud arsons are not even accused of setting the fire, but rather of hiring someone else to set it. Linkage evidence is irrelevant in these cases. Table 5.10 focuses on cases with a defendant accused of actually setting a fire. It shows that the percentge of accepted cases with direct evidence of the defendant's commission of arson is lower for fraud cases than for pyromania and spite cases, but actually higher than for vandalism cases. Moreover, 96 percent of the fraud cases in this category had at least evidence of opportunity. This is comparable with the figures in all other motive categories. On the other hand, the percentage of rejected cases with direct evidence was clearly the lowest in fraud cases.

As shown in Table 5.8, fraud cases in our sample compensated for their relative weakness in direct evidence by strength in circumstantial evidence categories, particularly evidence of motive (present in 95 percent of accepted fraud cases, the highest of the four major motives) and evidence of incendiary origin (present in 73 percent of accepted fraud cases). Other evidence categories commonly found in fraud cases accepted for prosecution included accomplice testimony (57 percent), evidence of accelerants (65 percent), evidence from financial and property records (51 percent), and evidence of arson-for-hire transactions (audio-visual or testimonial, 43 percent).

Table 5.9 shows that cases with all three key circumstantial elements (evidence of incendiary origin, motive, and opportunity) are more common among fraud prosecutions than among prosecuted cases in most of the other categories. At the same time, weaker circumstantial cases (including those with evidence of incendiary origin and opportunity and cases with only one key circumstantial element) are more common among fraud accepted cases than among prosecutions in the other motive categories. Some of these cases probably involved persons not charged with setting a fire, but their frequency still suggests that prosecution of fraud arson cases is particularly difficult.

Vandalism cases accepted for prosecution were more often based on direct than circumstantial evidence linking the defendant to the commission of the offense, but the margin (51 percent to 49 percent) was much narrower than in fraud cases (Table 5.10). Table 5.8 shows that vandalism prosecutions were particularly strong in evidence of opportunity to commit arson (97

Table 5.8

Accepted Cases (Augmented Prosecution Sample) and Rejected Cases (Augmented Declination Sample) by Key Evidence Types Present, by Motive

Evidence Type[a]	Percent of Augmented Prosecution Sample (P) and Augmented Declination Sample (D) with Evidence Present							
	Fraud		Pyromania		Spite		Vandalism	
	P (n=37)	D (n=13)	P (n=77)	D (n=18)	P (n=204)	D (n=48)	P (n=37)	D (n=17)
1. Evidence of Incendiary Origin	73	69	86	67	81	63	57	53
2. Evidence of Motive	95	92	58	33	89	85	41	47
3. Evidence of Opportunity	62	54	96	61	92	54	97	76
a) Suspect/Defendant seen entering/leaving scene	41	39	86	56	81	50	97	76
4. Direct Evidence of Suspect's/Defendant's Commission of Arson	41	15	71	33	64	27	51	53
a) Eyewitness to commission of arson	8	8	23	17	33	21	30	35
b) Confession	35	8	61	17	41	6	35	29

[a] For definitions, see Table 5.1, notes a-f.

Table 5.9

Accepted Cases (Augmented Prosecution Sample) and Rejected Cases (Augmented Declination Sample) by Evidence Combination/Type Present, by Motive

Evidence Type[a]	Percent of Augmented Prosecution Sample (P) and Augmented Declination Sample (D) with Evidence Present							
	Fraud		Pyromania		Spite		Vandalism	
	P (n=37)	D (n=13)	P (n=77)	D (n=18)	P (n=204)	D (n=48)	P (n=37)	D (n=17)
1. Direct evidence of Suspect's/Defendant's Commission of arson	41	15	71	33	64	27	51	53
2. No Direct Evidence/All of the following: Evidence of Incendiary Origin, Motive, and Opportunity	16	39	9	6	24	21	3	17
3. No Direct Evidence/No Motive Evidence/Both of the following: Evidence of Incendiary Origin and Opportunity	3	0	16	22	5	4	13	12
4. No Direct Evidence/No Opportunity Evidence/Both of the following: Evidence of Incendiary Origin and Motive	19	15	0	0	3	29	0	6
5. No Direct Evidence/No Evidence of Incendiary Origin/Both of the following: Evidence of motive and opportunity	8	8	3	0	4	8	11	0
6. No Direct Evidence/One of the following: Evidence of Incendiary Origin, Motive, or Opportunity	13	15	1	28	1	8	22	6
7. None of the following: Direct Evidence; Evidence of Incendiary Origin, Motive, or Opportunity	0	8	0	11	0	2	0	6
TOTAL	100	100	100	100	100	100	100	100

[a]For definitions of evidence types, see Table 5.1, notes a-f.

Table 5.10

Accepted Cases (Augmented Prosecution Sample) and Rejected Cases (Augmented Declination Sample) in which a Suspect/Defendant was Alleged to Have Actually Set a Fire, by Nature of Evidence Linking Suspect/Defendant to Commission of Arson, by Motive

		Percent of Augmented Prosecution Sample (P) and Augmented Declination Sample (D) With Evidence Present							
		Fraud		Pyromania		Spite		Vandalism	
Case Category	Nature of Evidence[a]	P (n=24)	D (n=12)	P (n=76)	D (n=18)	P (n=203)	D (n=48)	P (n=37)	D (n=17)
1. Direct Linkage	Direct Evidence of Suspect's/Defendant's Commission of Arson	58	8	72	33	64	27	51	53
2. Circumstantial Linkage	Evidence of Opportunity/ No Direct Evidence of Suspect's/Defendant's Commission of Arson	38	50	28	39	34	33	49	35
3. No Linkage	No Evidence of Opportunity/No Direct Evidence of Suspect's/Defendant's Commission of Arson	4	42	0	28	2	40	0	12
	TOTAL	100	100	100	100	100	100	100	100

[a]For definitions of evidence types, see Table 5.1, Notes c and e.

percent). Rejected vandalism cases also commonly had opportunity evidence (76 percent). Table 5.9 shows that some of the weaker categories of circumstantial cases (especially category 6) were quite common among vandalism prosecutions. Indeed, in terms of evidence types present, the rejected vandalism cases look stronger than the accepted vandalism cases.

Pyromania and spite cases are similar in their relatively high incidence of evidence directly linking the defendant to the commission of the arson. Table 5.10 shows that the split between direct (category 1) and circumstantial (categories 2 and 3 combined) cases was 72 percent to 28 percent for pyromania cases and 64 percent to 36 percent for spite cases. Only very small percentages of accepted cases in these motive categories were without any evidence linking the defendant to commission of the arson. These characteristics seem to confirm the hypothesis offered in Chapter 3 that once a suspect is identified, pyromania and spite cases are easier to move from investigation to prosecution than are vandalism cases. The major difference between cases in the pyromania and spite categories concerns the nature of the direct evidence available. Confessions were much more common in pyromania cases (61 percent of accepted cases) than in spite cases (41 percent). On the other hand, eyewitnesses were more common in spite cases (33 percent--the highest across all motives) than in pyromania cases (23 percent).

As might be expected, motive evidence is more important in spite cases (present in 89 percent of accepted cases) than pyromania cases (present in 58 percent of accepted cases). Evidence of threats is particularly critical in spite cases (present in 65 percent of accepted cases).

Witness problems seemed to play a much more important role in rejection of spite cases (50 percent) than of pyromania cases (11 percent). This is easily explained: spite cases rest more heavily on testimonial evidence establishing the defendant's motive and linking the defendant to commission of the arson, while pyromania cases more often rest on confessions.

In general, spite cases accepted for prosecution reveal a significant number of strong circumstantial cases (category 2 in Table 5.9), while pyromania cases were stronger in category 3 (evidence of incendiary origin and opportunity, but no evidence of motive). This results in large measure from the fact that motive evidence is regularly available in spite cases, but is not so often available in pyromania cases. This may mean that convictions

are more difficult to obtain in circumstantial pyromania cases than in circumstantial spite cases.

We have described a number of differences in the evidentiary patterns and other characteristics of accepted and rejected arson cases in the major motive categories. These differences appear to spring largely from the types of evidence available in these different types of cases. The data do not reveal any dramatic differences in the stringency of case screening across motives. However, there is some anecdotal evidence of differences in the stringency with which particular jurisdictions screen arson cases in different motive categories. This evidence primarily concerns screening of fraud cases. Investigators and prosecutors in all of our sites reported that fraud cases were generally more complex and difficult to win. Fraud arson defendants are more likely to be able to afford private counsel with experience in arson defense and private cause-and-origin experts to rebut the prosecutor's evidence of the fire's incendiary origin. Because of these difficulties, the question naturally arises whether more stringent standards are applied to fraud cases than to other arson cases. Evidence from at least Denver suggests that screening standards for fraud cases may, indeed, be more stringent. Denver was alone among our four sites in having no prosecuted fraud cases in either the investigation sample or the augmented prosecution sample. There were six fraud (or suspected fraud) cases in the randomly selected investigation sample of 100 cases: four were not presented for prosecution and the other two were rejected. The augmented declination sample for Denver included four other rejected fraud cases. Against these data, one should place the opinion of the Arson Bureau investigators that there is a substantial amount of fraud arson in Denver. The Arson Bureau has been able to develop some fairly strong cases but has had little success in getting them accepted for prosecution by the district attorney's complaints division. The bureau has had better luck with cases presented to the grand jury. Several cases declined as criminal prosecutions by the district attorney's office have gone to civil trial as a result of the insurance company's denial of claim payment. Obviously, the standards of proof are lower in civil cases, but there still is an appearance that fraud arsons are screened more stringently than other arson cases in Denver. Consider the following two cases:

1) A $115,000 restaurant fire with fraud strongly suspected. There was clear evidence of incendiary origin: Three separate points of origin with flammable liquid trailers on two floors; burn patterns indicating use of accelerant; no evidence of forced entry; a gas can was found in a park 40-50 feet from the back door; quantities of dirty dishes, cups and glasses indicated hasty departure by employees; low inventory of food and liquor; a clock placed fire start before 2:25 AM. Motive evidence: The rent was in arrears, the restaurant's business was poor. Linkage of Suspect(s) to Fire: A key witness (a waitress) placed restaurant owners at the scene about 11 minutes before the fire was reported; if someone else had been involved, they would have had only 11 minutes to break in, pour gasoline on two floors, and ignite it in time for the fire to start and damage the electrical system so the clock could stop at 2:25 AM--the investigator's note: "for this series of events to occur over such a short time is so improbable that it borders on the impossible!" This same witness positively identified the cook (a cousin of the owner) running out the back door as the fire started behind him (she saw flames in the doorway). The key witness passed a polygraph test. Two other witnesses saw a person running from the back door but there were some problems with their identification (one could not pick the cook out of a photo line-up and the second identified the cook as looking the most like the person he saw of the photos in the line-up; however, the second witness' description of the clothes worn by the person differed from that of the key witness. The cook had an alibi--his girlfriend said he was in bed with her at the time; his cousin said he drove the cook to girlfriend's house at 1 AM; the cook failed a polygraph test. The two restaurant owners denied involvement, arguing that they were underinsured and had nothing to gain. They attempted to shift blame to the building owner who they said had threatened them recently, tried to get the insurance coverage increased (unsuccessfully, as it turns out). The restaurant owners also failed the polygraph test. This case was rejected on the grounds that, although there was probable cause, there was not a reasonable likelihood of conviction. Apparently, the identification problems and the key witness' possible ulterior motive (the cook had tried to kiss her the evening of the fire, as they were working together in the kitchen) played a part in the rejection.

2) A $150 spite trash fire in the basement of an apartment building. The defendant had quarreled with the building manager in the basement and threatened him, approximately 10 minutes before the fire started. There had been other quarrels and several fires in the defendant's apartment. The defendant was in the process of being evicted. However, the only linkage of the defendant to the scene was the manager's testimony about the encounter 10 minutes before the fire. This case was accepted for prosecution (and later dismissed).

Case 1 seems clearly to be a stronger case on its merits than Case 2; indeed, when we described the two cases and their screening outcomes to the chief complaints deputy, he expressed surprise that the decisions had not been reversed. This apparent inconsistency in screening decisions underscores the frequently subjective nature of the process. Everywhere, "gut reaction" seems to play a part in deciding whether to accept a case. Since prosecutors are human beings, their "gut reactions" may differ from day to day depending on a variety of professional and personal factors.

It should be noted that, despite the evidence of inconsistency in screening decisions, conviction rates were uniformly high in the four jurisdictions. Moreover, investigators in none of our jurisdictions were openly critical of prosecutors' general screening policies. We did hear some criticism of specific decisions but there appeared to be general satisfaction with the prosecutors' handling of the cases presented to them.

5.3.5 Multivariate Analysis

We have examined the prosecutorial case screening process from several perspectives. In particular, the percentage of the prosecuted and declined cases with various types of evidence was discussed by site and by motive category. Now, we present the results of multiple regression analysis relating the case acceptance decision simultaneously to a variety of evidence factors, in order to learn more about the relative contributions of the various factors.[1]

For each site, we tested several alternative models using a wide variety of evidence variables as independent variables. The dependent variable for all models was whether or not the case was accepted for prosecution. In Table 5.11, some interesting aspects of the regression analysis are summarized. For each site, we have given the highest value of R^2 and have listed the statistically significant independent variables in the corresponding equation, along with the sign (positive or negative) of each coefficient.[2]

---

[1] A more detailed description of the regression equations can be found in Appendix A. We present here selected results.

[2] The value of R^2 represents the proportion of variation in the decision to accept or decline that is related to, or explained by, the independent variables. The significant variables represent the specific types of evidence that appear to play the greatest independent roles in decisionmaking.

Table 5.11

Summary of Regressions Relating Decision to Accept to Various Evidence Types
(Augmented Prosecution Sample, n=408; Augmented Declination Sample, n=113)

Site	Variable	Sign	Level of Significance	R^2
Bronx	Evidence of Suspect/Defendant Quarreling With/ Threatening Victim	+	.10	.120
Denver	Evidence of Accelerants	+	.10	
	Suspect/Defendant Seen Entering/Leaving Scene	+	.05	
	Confession	+	.05	
	Eyewitness Testimony	+	.05	
	Defendant/Suspect Statement on Motive	-	.05	
	Expert Evidence on Incendiary Origin of Fire	-	.05	.349
San Diego	Suspect/Defendant Seen Entering/Leaving Scene	-	.10	
	Confession	+	.05	
	Eyewitness Testimony	+	.10	.239
Cleveland	Evidence of Incendiary Origin	+	.10	
	Evidence of Motive	+	.10	
	Evidence of Opportunity	+	.01	
	Witness problems	-	.01	.672

It is evident that the results vary considerably across the four sites. The value of R^2 ranges from a low of .120 for the Bronx to a high of .672 for Cleveland. In the Bronx, only one type of evidence, threat against the victim, even approaches statistical significance (it is significant at the .10 level but not at the traditional .05 level). However, we must remember that only six declined cases were found in the Bronx. In Cleveland, the existence of evidence of opportunity raises the probability of case acceptance, and the existence of a witness problem greatly lowers it. Evidence of incendiary origin and motive also increase the probability that a case will be accepted for prosecution.

In Denver, several factors play some role in the decision-making process, but their combined effect is much smaller than in Cleveland. (The majority of variance cannot be related to our measured evidence variables.) In San Diego, only the existence of a confession seems to explain some portion of the accept/reject decision.

On the whole, these results square well with the portraits of case handling that have been taking shape throughout this chapter and the last. In the Bronx, where screening appears to be rather stringent and to occur rather early in the case, very few cases are presented to the prosecutor and then declined. Those few cases that are declined at this level cannot be related to any obvious evidentiary pattern, (as evidenced by the low R^2). We suspect that these are cases with idiosyncracies related to the quality of evidence, in cases that on first examination looked quite strong.

In San Diego, we also found a stringent system organized around a set of explicit principles. There, significant case screening occurs after cases are presented and a higher proportion are declined than in the Bronx. While the explained variation is fairly low, the key variables pertain to the existence of direct evidence linking the suspect to the crime. Apparently, although cases reaching the prosecutor are already quite strong, some are still screened out for lack of direct evidence, (hence the negative effect of opportunity evidence such as testimony on the defendant/suspect seen entering or leaving the scene of the fire).

In Denver, we noted that overall the screening is fairly strong, but that some cases are presented to the prosecutor even though the investigators have doubts as to their strength. The regression results (overall R^2 of .349,

and the fact that several variables appear significant), tend to support this description of the screening process, because they suggest discrimination by prosecutors on the basis of the kinds of evidence available in the case.[1]

In Cleveland, two factors stand out, and together contribute to a very strong model. Absence of evidence of opportunity and problems with potential witnesses account for most of the explained variance. We noted earlier the relative leniency of investigators' pre-screening in Cleveland, making the prosecutorial screening decision more clearcut and easier to explain. On the other hand, many relatively weak cases are accepted (compared to the other sites), but the conviction rate is extremely high. This strongly suggests that Cleveland's prosecutors are extremely skilled in their handling of arson cases.

Finally, it is worth noting that the regression equations do not indicate that fraud cases are more, or less, likely than other cases to be accepted for prosecution. As explained in Appendix A, however, we have included in our analysis only cases in which at least one defendant was accused of actually setting the fire. Preliminary regressions, including cases in which the only suspects were persons alleged to have hired a torch, suggest that fraud cases may have been more likely than others to be accepted in the Bronx, but not in the other sites.

5.4 Elements Involved in Arson Case Screening: A Composite View

In Section 5.3, we analyzed and compared the patterns of actual arson case screening decisions across our four study sites and across motive categories. In this section, we slice the problem in a slightly different way and present a composite view of the most important factors involved in arson case screening. While we draw on data and examples from the four sites, we intend this section to describe the range of elements involved in arson case screening everywhere and the range of judgments which may be involved in assessing each element. We include elements used in assessing evidentiary strength (both the presence of evidentiary elements and the quality of those elements) and categorical criteria--that is, criteria based

[1] On the other hand, the negative effects on case acceptance in Denver of motive evidence and expert evidence on incendiary origin are counter-intuitive and largely inexplicable. The only possible explanations for these effects are that they reflect, respectively, the tendency in Denver to reject fraud cases (which usually rely heavily on motive evidence) and to discount evidence of incendiary origin in the screening decision. If this is the case, it may simply be a coincidence that evidence of incendiary origin is statistically associated with case rejection.

on the nature of the case rather than on the strength of the evidence. The array of factors also includes informal or unstated criteria that may play a role in screening decisions.

5.4.1 Evidentiary Strength

Evidence of Incendiary Origin

Evidence of incendiary origin is considered an important screening criterion by the former special arson prosecutor in San Diego. He believes that arson cases can stand or fall based on the evidence of the cause and origin of the fire and he cited examples of cases lost at trial because of weaknesses in this area. (See Chapter 6 for a discussion of these cases.) The critical distinctions concerning evidence of incendiary origin are among physical evidence (e.g., laboratory analysis of fire debris showing presence of accelerants), expert testimony (e.g., investigators' observations, burn patterns, speed of fire spread, evidence of trailers), and negative corpus evidence (elimination of accidental causes). The latter type of evidence can be extremely difficult to present convincingly, and cases without physical evidence or at least expert testimony on fire characteristics indicating arson can be difficult if they rest solely on negative corpus to prove incendiary origin.

Respondents in our sites other than San Diego did not report that evidence of incendiary origin was particularly important in case screening or case outcome. The implication is that the investigators tend to screen out cases with problems in establishing incendiary origin before they are presented to the prosecutor. The chief complaints deputy in the Denver District Attorney's Office told us that, because of his great respect for the technical expertise of the Arson Bureau's investigators, he assumes that the evidence of incendiary origin is strong in all cases presented to him. As shown in Table 5.1 above, 77 percent of the prosecuted cases in our sample included evidence of incendiary origin.

Evidence of Motive

Motive is not a legally required element of proof in the crime of arson. Perhaps as a result, it does not appear to play a critically important part in screening decisions, except perhaps in San Diego (where it is included in the list of specific arson screening criteria). However, motive does usually receive serious consideration in arson screening. Three-fourths of the sampled arson cases accepted for prosecution include evidence of motive. The chief complaints deputy in Denver considers motive an important part of a

case, and lack of sufficient motive evidence has played a role in decisions to reject arson cases. For example, a case involving a large loss ($500,000) fire in an apartment building undergoing renovations was rejected in part because the construction worker suspected of starting the fire had no apparent independent motive and could not be linked to the owner in a "torch" role. Nor could investigators discover any strong motive for the building owners to set fire to the property. There were other problems with this case as well (e.g., conflict between the Arson Bureau's cause-and-origin investigation and an investigation by an insurance company expert), but the lack of motive evidence was critical in the decision. As discussed in Chapter 4, the investigative development of motive evidence in suspected fraud cases can be extremely difficult and complex; it often involves painstaking examination of property and financial records. The screening of such evidence--which is often open to differing interpretations--can also be difficult and, ultimately, rather subjective.

The chief of the Arson/Economic Crime Bureau in the Bronx assesses motive evidence as part of his pre-screening of arrests. As an example of the stringency of his screening standards, he cited a "boyfriend-girlfriend" case which seemed circumstantially quite strong. A witness could testify to a serious argument between the two during the afternoon before the fire. However, this was not considered strong enough since the witness could not testify to any explicit threats. Although there were other evidentiary aspects of the case that appeared quite strong, the bureau chief would not approve an arrest. The distinction between a prior argument and a threat of violence (or, ideally, an explicit threat to burn) can thus be an important part of the assessment of motive evidence in spite arson cases.

Evidence Linking the Defendant to Commission of the Arson

The key screening criterion in arson cases is linkage of the suspect/defendant to the fire. As shown in Table 5.3 above, 98 percent of the prosecuted cases in our sample in which a defendant was accused of actually setting a fire had at least evidence of the defendant's opportunity to commit the crime. The chief of the Bronx's Arson/Economic Crime Bureau believes that some form of direct, and preferably eyewitness, testimony linking the defendant to the fire is critical to development of a strong

case. However, as we have already shown, it is rare to have an eyewitness in an arson case (eyewitness testimony was available in only 28 percent of the augmented prosecution sample cases). Thus, the available linkage evidence usually amounts to evidence of "opportunity." Several investigators and prosecutors we interviewed spoke of arson as a "crime of opportunity." One respondent noted that strong arson cases are more difficult to build than cases of other crimes of opportunity like burglary, because only rarely is physical evidence (e.g., stolen property, fingerprints) available to tie the suspect to the scene.

The typical evidence of opportunity in arson cases is testimony placing the suspect at or near the scene close to the time of the fire. Obviously, the closer to the scene the suspect can be placed and the closer to the time of the fire, the stronger the case. As with opportunity evidence in any criminal case, questions of timing can be critical and troublesome. Linkage evidence can range from testimony that the defendant ran from the burning building carrying a gasoline can to testimony that the defendant was in the area 30 minutes before the fire started. Obviously, when a prosecutor considers evidence of opportunity, the more exclusive the opportunity the better. Consider the following San Diego case: two roommates left an apartment together; one waited in the car while the other (ultimately the defendant) went back into the apartment. The apartment manager watched from his nearby window as the defendant entered the apartment and left 15 minutes later. The manager continued to have the apartment's only door in view from the time the defendant left until the fire became evident some ten minutes after that. The investigators found no evidence of forced entry of the rear windows. Thus, it appears that "exclusive opportunity" was established.

Although case screening standards were generally quite stringent in San Diego, cases with no linkage evidence have been accepted for prosecution. In one case of a garage fire, there was evidence of the defendant's motive and threats to burn the property, but no witness placing him at or anywhere near the scene. The defendant had an alibi which was later undermined when the witness admitted lying. While there was no linkage evidence whatever in this case, the arson prosecutor claimed that it met his criteria: there was clear evidence of incendiary origin and motive, and the defendant was caught

in a lie. (He had correctly identified to the investigators, without any other independent source of information, the exact point of the fire's origin. The defendant claimed to know about fire behavior from his experience in the Marine Corps. However, the prosecutor produced evidence that the defendant had never been in the Marine Corps.) This lie, together with the other evidence, made the case strong enough to accept, in the prosecutor's mind.

Further evidence of the subjectivity and occasional inconsistency in assessments of linkage evidence may be found in a group of Bronx County cases. In the "boyfriend-girlfriend" case described earlier, the linkage evidence was circumstantial but seemed quite strong. The fire was set in the woman's apartment through a broken window from the fire escape. The suspect was seen descending the stairs in the building just after the fire started. A storekeeper across the street stated that the man had purchased lighter fluid just before the time the fire started. (The fire marshals determined that a "flammable liquid" was present but could not specify lighter fluid.) The storekeeper also stated that, shortly after the time the fire started, the same man purchased bandages for a cut hand (perhaps cut breaking the window from the fire escape). However, since no witness could place the suspect at the precise scene of the fire, the chief of the Arson/ Economic Crime Bureau would not approve the suspect's arrest.

Yet several other cases in our Bronx sample appeared to have equally strong or perhaps even weaker linkage evidence, but were accepted for prosecution. The following summaries are presented in descending order of the apparent strength of the linkage evidence:

- A tenant had been evicted for non-payment of rent. She returned to the apartment and, finding the door nailed shut, borrowed a hammer from a neighboring tenant and gained access. Shortly thereafter, she left with some possessions and a fire was discovered in the apartment. Another neighboring tenant saw the suspect borrow the hammer and later leave the building. There was no eyewitness to the suspect setting the fire.
- A traffic patrolman saw three men running from a burning building, one of whom was carrying what appeared to be a gasoline can. The officers gave chase, caught and arrested the two individuals <u>without</u> the gasoline can.

- A tenant returned to his burning apartment apparently to rescue possessions; he appeared to be extremely upset. The tenant was charged with setting the fire.

As was shown in Table 5.7 above, a high proportion of Cleveland's prosecuted cases in which a defendant was accused of actually setting a fire were based on circumstantial evidence. For example, an alleged arson-for-hire involved a fire originating in the bedroom where a tenant's children were sleeping. The tenant, it was alleged, had been hired by the landlord to set the fire. She admitted presence in the apartment but vehemently denied setting the fire. There were no witnesses. The defendant's admission of presence at the scene constituted circumstantial linkage evidence but the circumstantial picture was very weak given the implausible modus operandi (how likely was it that she would set a fire in the bedroom where her children were sleeping?) and the lack of evidence linking her to the property owner in a torch role. The judge directed a verdict of not guilty for want of sufficient evidence.

While testimonial evidence is the major method of establishing defendant opportunity, other strategies--for example, exclusive possession of keys--may be used as well, as the following two Denver cases reveal:

1) This was a $50,000 fire in a bar discovered at 3:00 AM. There was an electrically timed ignition device with evidence of large gasoline pours and a secondary device to be triggered by a string stretched to an adjacent garage. The building was found locked and secured--there was <u>no evidence of forced entry</u>. The bar owner had the <u>only</u> two sets of keys to the bar and the garage (entry to both was necessary to set the primary and secondary devices). A grand jury indicted the bar owner in this case.
2) This was a $500,000 restaurant fire. The Denver Fire Department's and insurance investigator's laboratory analysis differed as to presence of accelerants; however, burn patterns, speed of fire spread, and color of flames all indicated that an accelerant was used. There was <u>no evidence of forced entry</u> and the restaurant owner and his wife had the <u>only keys</u>. The owner's alibi was undermined by evidence that he had not been at his cousin's bar continuously, as he had alleged. The grand jury did not return indictments in this case.

Reliability and Credibility of Witnesses

Obviously, brief summaries of facts and witness' testimony cannot do justice to the subtlety and difficulty of many of the decisions faced by prosecutors (and grand juries) considering arson cases. They must weigh not only the content of the testimony but also the apparent reliability and credibility of the witnesses. This is a factor in evaluating all witnesses, not only those linking the suspect to the fire scene. In Denver, investigators suggested that some cases were rejected because key witnesses were not "first class citizens." Clearly a history of criminal conduct or animus against the defendant can undermine a witness' credibility and prosecutors often consider these aspects of case strength in reaching their screening decisions. (Recall that the decision to reject the Denver restaurant case in which the witness could testify to seeing the suspect, a cook, running from the burning building was based in part on concern that the witness' rejection of the cook's advances might undermine her credibility.)

Evidence Corroborating Accomplice Testimony

In virtually all jurisdictions, statute or case law prohibits conviction of a defendant solely on the basis of the uncorroborated testimony of an accomplice. Many arson cases--particularly fraud arsons--involve more than one actor. Thus, prosecutors screening cases must ensure that there is evidence corroborating the accomplice testimony. In a San Diego house fire case, there were no immediate suspects. Later, two witnesses came forward, identifying the arsonist and claiming that they were with him when he set the fire. One of these witnesses died shortly thereafter, and the case was rejected for want of evidence corroborating the testimony of the surviving witness.

What constitutes corroborating evidence is a matter of some controversy and wide variation across jurisdictions. A memorandum on sufficiency of evidence in arson cases, prepared by the Cuyahoga County (Cleveland) Prosecuting Attorney's Office, takes a broad view of the matter. Referring to recent case law, the memorandum suggests that all that is necessary for corroboration is "some credible evidence" (including e.g., evidence of

motive) other than the testimony of the accomplice to show that the defendant was involved.[1]

5.4.2 Categorical Criteria

A second set of screening criteria involves categorical attributes of cases as opposed to assessments of their evidentiary strength. Some of these criteria are clear and objective; others are more difficult to determine or apply.

Seriousness of the Fire

Seriousness of fire loss may be a factor in the screening decision. In Denver, there is an office policy against filing arson charges if the fire caused less than $200 damage. In San Diego, there is no firm screening criterion concerning dollar loss, but several cases in our sample were rejected because they involved minor fires. In general, our data show that, while fires causing damage of $5,000 or less predominated among both accepted and rejected cases, their predominance was heavier among the rejected cases (83 percent to 73 percent). This suggests that dollar-loss may be a consideration in prosecutorial screening of arson cases.[2]

Another aspect of the seriousness of a fire which may figure in case screening is the nature of the fire damage. In Colorado, for example, there must be actual burning or charring of the structure to charge first or second degree arson;[3] smoke damage is insufficient. In New York State, by contrast, smoke damage alone is sufficient to charge arson if other required factors are present.

Perhaps the most controversial and subjective way to assess the seriousness of an arson for screening and charging decisions is the concept of endangerment. In the Bronx and San Diego, potential endangerment is considered in the charging decision. New York's reckless endangerment statute can be used, even if there was little or no damage and no possibility

---

[1] State v. Myers 53 Ohio St. 2nd 74 (1978); Forbes v. State (Tex. Crim. App. 1974), 513 S.W. 2d 72, 76; Edwards v. State (Tex. Crim. App. 1968) 427 S.W. 2d 629.

[2] On the other hand, one investigative unit supervisor suggests that prosecutors may be more cautious in accepting arson cases involving high dollar-loss fires because of their higher visibility.

[3] People v. LeFebre, 190 Colo. 307, 546 P2d 952 (1976).

of proving intent to commit arson, as long as there was a potential threat of injury to occupants or firefighters. The applicability of this statute to endangerment of firefighters is particularly useful in cases of arsons in vacant buildings.

In San Diego, the former arson prosecutor used the potential endangerment of occupants posed by the attempted arson of a fully-occupied highrise hotel in his presentation to the judge regarding sentence. Moreover, this prosecutor noted that, under a non-specialized screening and prosecution of arson cases, not as much attention would be paid to potential endangerment. This hypothesis appears to be confirmed by information from Denver. To file fourth-degree arson charges, the district attorney's office requires evidence of real endangerment rather than simply potential endangerment--this despite the fact that the statutory language is unclear[1] and there is no case law on the point. The office declined a case of a dumpster fire which caused no damage, despite eyewitness testimony and despite the fact that the dumpster was against a building. If the fire had spread to the building, the occupants--who included elderly and handicapped people--might well have been endangered. However, the fire did not spread, so the endangerment remained potential.

Even actual endangerment of firefighters and civilian occupants is not always considered an important factor in accepting arson cases in Denver. One deputy district attorney offered the opinion that fraud arsons were primarily crimes against insurance companies. In general, the office does not consider actual endangerment of firefighters to qualify a case for filing as fourth-degree arson. Consider the following example: the son of the owner of a demolition company set fire to a building the company had been hired to demolish (in order to save the considerable cost of removing the debris). In the course of extinguishing the serious fire that resulted, two firefighters were injured. The Arson Bureau investigated and developed a very strong case, including an eyewitness, but the district attorney's office rejected the case for filing on the ground that when a firefighter takes the oath, he agrees to place his life on the line fighting fires. (Of course,

[1] "A person who knowingly or recklessly starts or maintains a fire or causes an explosion...and by so doing places another in danger of death or serious bodily injury or places any building or occupied structure of another in danger of damage commits fourth-degree arson." Colorado Revised Statutes, Article 18-4-105.

this ignores the point that if this particular fire had not been set, these firefighters would not have had to place their lives on the line in this building.) It is possible that a specialized arson prosecutor might have given these factors more consideration.

Other Categorical Criteria

Other categorical factors that may be involved in arson case screening decisions include the target of the arson and the investigator presenting the case. The former San Diego arson prosecutor decided not to pursue vehicle fires. This decision resulted from caseload pressures and experience with the difficulty of proving such cases.

An obviously unstated--and possibly even unconscious--screening factor may be the reputation of the investigator presenting the case. In one of our jurisdictions, several investigators suggested that the prosecutor's office was more likely to accept a case from an investigator with a "good track record" than from one with a reputation for presenting weak or poorly prepared cases. New investigators or those less well-known to the prosecutor may be at a disadvantage as well.

5.5 Summary

The criminal justice system is faced with a difficult set of cost/benefit decisions regarding prosecutorial screening. Broadly speaking, a stringent screening approach increases the likelihood that convictions will be obtained in prosecuted cases, conserves resources, and minimizes the probability of false arrest and other harassment of innocent citizens. However, stringency may also increase the likelihood that some cases in which convictions could be obtained will never reach prosecution. The potential benefits in setting the prosecution threshold somewhat lower include a greater absolute number of convictions and the additional deterrent effect resulting from a more aggressive prosecution policy.

Whether the benefits would be worth the additional cost is a question that must be considered with reference not only to resource requirements and quantitative measurement of case outcomes, but also to the very real and serious civil liberties and other legal issues involved. Ideally, screening policies should aim for a middle ground which focuses resources on the most worthy cases while maintaining justice and fairness in the system.

Prosecutorial screening is a vaguely demarcated part of the criminal justice system. Prosecutors can become involved in a case at a variety of points in time from well before the arrest to well after the filing of formal charges. In addition, informal consultation can begin well before and persist long after final case screening has occurred. Prosecutorial screening of cases is a relatively new phenomenon (indeed, the traditional police domination of the charging process persists in many jurisdictions), but all study sites vest considerable screening authority in the prosecutor in the pre-arrest and pre-filing stages.

The structure of case screening varies as much as its timing. Two of our sites, San Diego and the Bronx, employed a fully centralized and fully specialized model of screening--that is, all arson cases were screened by one attorney or unit, and that attorney/unit was responsible only for arson cases. Denver employs a centralized but non-specialized approach in which a central Complaint Division screens all felony cases. Cleveland's screening is decentralized and non-specialized.

Centralized/specialized screening has a number of advantages, particularly if the attorneys who screen the cases also prosecute them. These advantages include the following:

- it facilitates development of greater technical knowledge of fire behavior and fire cause-and-origin investigation which is necessary to evaluate arson cases with optimum consistency and effectiveness;
- combined with specialized vertical prosecution, it may foster a more realistic screening of cases, since the same attorneys who do the screening must also handle the case to disposition--that is, they must live with their decision to accept a case. (Of course, it is important that this not lead to overly conservative screening);
- it facilitates close working relationships between arson investigators and prosecutors which, in turn, are very helpful in the case development process;
- it facilitates developing full and detailed knowledge of arson and related statutes, which is very important in the often subtle and complex charging decisions required in arson cases;

- it facilitates implementing innovative uses of screening such as "preventive prosecution" (holding suspected arson-for-profit cases under consideration to deter the suspect from filing an insurance claim) and tracking of individuals who may first enter the system as minor firesetters but move on to more serious arson; and
- it inculcates in prosecutors a deeper sense of the seriousness of arson, and particularly the actual and potential dangers posed to firefighters and occupants of buildings suffering incendiary fires (even fires resulting in minor dollar loss), as well as to individual properties and whole neighborhoods.

Centralized/non-specialized screening offers some but not all of these advantages. In particular, non-specialized screening units are typically limited to the screening functions and do not actually prosecute cases. Thus, the benefits of continuity between screening and actual prosecution are lost. In addition, because the non-specialized screening unit must handle all types of cases, it cannot develop the detailed familiarity with arson cases and thus may be more likely to be inconsistent in screening decisions.

Although they initially appear quite similar (low rejection rates, high conviction rates), our study sites actually represent a range of prosecutorial screening patterns, none of them optimally efficient. It is clear that, in all our sites, arson cases presented for prosecution are generally quite strong in terms of evidentiary elements present. The vast majority of accepted cases included the key elements of a circumstantial case: evidence of incendiary origin, motive, and opportunity. Over 60 percent included direct evidence linking the defendant to the actual commission of the arson, in the form of a confession or eyewitness testimony. The rejected cases were also strong in circumstantial elements, although less strong in direct linkage evidence. In San Diego, accepted and rejected cases were generally so strong as to suggest a slight relaxation of screening criteria. Denver's screening was generally rather stringent, although there are indications that fraud cases may be subjected to even higher standards than cases in other motive categories. In the Bronx, prosecutorial screening is extremely stringent when there is an opportunity to screen the arrest, but much more lenient when circumstances preclude this. Finally, Cleveland's accepted and rejected cases are much more heavily circumstantial than those in the other three sites, suggesting greater lenience in both investigators' pre-screening

and prosecutors' screening of cases. Indeed, prosecutors seem primarily to reject cases with obvious evidentiary weaknesses or witness problems. However, viewed in the light of Cleveland's extremely high conviction rates, this suggests that the other sites may be overly stringent in their prosecutorial screening of arson cases.

It has been suggested that specialized screening results in more lenient screening--that the special arson prosecutor becomes so close to the investigators that he is tempted to accept all the cases the investigators submit. This criticism is not borne out by our data. Indeed, the most highly specialized arson case screening structures existed in San Diego and the Bronx, and attorneys in both of these sites were generally quite stringent in their screening of arson cases. On the other hand, the least specialized screening system existed in Cleveland, and there we found more lenient screening practices.

Fraud and vandalism cases accepted for prosecution were much more likely to depend on circumstantial evidence alone, while pyromania and spite cases much more frequently included direct evidence linking the defendant to commission of the arson. These differences reflect the differences in types of evidence normally available in these categories of arson cases. This solidifies the perception that arson is really a set of almost discrete crimes rather than a monolithic crime.

Obviously, presence or absence of evidentiary elements can tell only a part of the screening story. Assessment of the quality of those elements is also extremely important. Indeed, subjectivity and "gut reactions" can dominate the decision-making process. We found some anecdotal evidence that fraud cases may be subjected to more stringent screening standards than other types of arson cases. Otherwise, however, the variation seemed non-systematic. There were a number of instances of seemingly inconsistent screening decisions--when what appeared to be stronger cases were rejected while weaker cases were accepted. Subjectivity, inconsistency, and "gut reactions" cannot be banished from the screening process, but their role can be reduced by establishing more specific arson case screening criteria.

The following evidentiary elements and categorical criteria (case characteristics) should be considered for inclusion in arson case screening guidelines:

- Evidence of Incendiary Origin: the basic types of evidence in this category are physical evidence (e.g., laboratory analysis of fire debris), expert observation of burn patterns and fire characteristics, and negative corpus evidence (i.e., elimination of accidental causes); guidelines might specify minimum requirements in each category.
- Evidence of Motive: in fraud cases, this can involve complex analysis of financial and property records which are often subject to differing interpretations; in spite cases, the key distinction may be between evidence of general hostility (e.g., a previous argument) and specific threats to burn. Motive evidence is less important, but still very useful, in pyromania and vandalism arsons, which are often essentially irrational acts.
- Evidence Linking the Suspect to the Commission of the Arson:

  --direct linkage such as eyewitness testimony or confession is obviously preferable.

  --circumstantial linkage reflecting opportunity to commit the arson. The key decision relates to the degree of exclusivity of opportunity. Is there evidence showing that only the suspect could have set the fire or merely, for example, that the suspect was seen in the area one half-hour before the fire started?

- Reliability and Credibility of Witnesses: This is certainly not an issue unique to arson cases, but screening prosecutors must weigh the effect on witnesses' credibility of prior criminal conduct, animus against the suspect, or other potential ulterior motives for giving testimony.
- Categorical Criteria (case characteristics): In order to target resources or to comply with statutory requirements, prosecutors' offices may wish (or need) to consider categorical criteria, such as the following, in screening arson cases:

  --fire seriousness--dollar-loss, character of fire damage (e.g., charring v. smoke damage), degree of actual or potential endangerment to firefighters and/or occupants;

  --fire target--car fires, trash fires or other categories may be excluded from acceptance, depending on resource constraints.

Only one of our sites, San Diego, employed specific guidelines, but other jurisdictions might benefit from development and use of such guidelines.

Both prosecutors and investigators might then develop a more precise sense of what is required in an acceptable case. The screening criteria should bring together systematically the basic elements which are already employed informally in screening arson cases. The specific levels of proof or evidentiary quality required must be a matter of local determination, based on statutory language and on the jurisdiction's overall standards for case acceptance.

6.0 PROSECUTION OF ARSON CASES

Despite the recurrent theme in much of the literature that prosecution of arson is extremely difficult, this study shows that, under current case presentation and screening standards, most arsonists can be convicted once prosecution is commenced. Overall, the study found that at least one defendant was convicted on some charge in 79 percent of the prosecuted cases; in 61 percent of the prosecuted cases, at least one defendant was convicted of an arson charge; and in 37 percent of the cases, at least one defendant was convicted on the most serious arson charge filed. Although very few arson investigations ever lead to adult prosecution (seven percent of the cases in the randomly selected investigation sample), those that do display conviction rates comparable to those found in most other felonies.[1]

As with most criminal cases, the vast majority of the prosecuted arson cases in the study sample ended in guilty pleas. However, the conviction rate was lower for cases reaching trial than for the entire sample (58 percent as opposed to 79 percent) and substantially lower in three of the four study sites. Thus, this chapter will devote considerable attention to the characteristics and outcomes of arson cases reaching trial and the difficulties that may arise in arson trials. During this discussion, however, the reader should not lose sight of the surprisingly high overall arson conviction rates found in the study.

A major reason for these high conviction rates is that most of the arson cases accepted for prosecution appear to be quite simple and straightforward. Much of the literature suggesting that arson is more difficult to prosecute than other crimes has focused on problems typically posed by complex fraud arson cases. Arson-for-profit cases represented only nine percent of the prosecuted cases examined in this study. The bulk of the prosecuted cases differ from complex fraud arsons in several ways. Unlike arson-for-profit, which often involves a premeditated course of action calculated to avoid detection, most of the prosecuted arsons were spontaneous and emotional acts, in which little advance thought was given to concealing the incendiary origin of the fire or to avoiding observation. Exactly one-half of the cases in the augmented prosecution sample were motivated by spite or revenge. Arsons associated with pyromania or other mental disorders or with vandalism (19 percent and nine percent of the prosecuted cases,

[1] See above, Section 3.3.3 and Table 3.15.

respectively) are also largely spontaneous acts performed by individuals largely uninterested or unskilled in covering their tracks.

Most cases reaching prosecution do not involve multiple defendant conspiracies or multiple fire incidents. In 90 percent of the prosecuted cases, charges were filed against one defendant for a single fire incident. Thus, most prosecuted arsons are relatively simple and do not involve many of the characteristics attributed to classic landlord arson-for-profit cases: complex conspiracies whose successful prosecution requires painstaking collection and analysis of physical evidence at the fire scene to establish the skillfully concealed incendiary origin of the fire, surreptitiously gathered audio-visual evidence of the hiring of a torch, and detailed research in financial and property records to establish motive. Instead, the typical prosecuted arson involves relatively simple expert testimony establishing the clear incendiary origin of the fire, a few witnesses to link the defendant to the commission of the arson or to the scene, and a few witnesses to prior threats or arguments or other matters tending to establish motive. However, the simplicity of establishing these elements of a case should not be overstated--and indeed, we present in this chapter many examples of the difficulties that can arise at many points in an arson prosecution. At the same time, the complexity of the average arson prosecution should not be exaggerated.

It does appear that fire seriousness is associated with acceptance of arson cases for prosecution. For example, 10 percent of the prosecuted cases involved death or injury, as opposed to only three percent of the randomly selected investigation sample. Another measure of seriousness is the amount of damage caused by an arson fire. The median dollar loss for fires resulting in prosecution was nearly twice as high as that for the random sample of investigated cases ($950 compared to $500).[1] The difference in the mean dollar loss between the two groups of cases is even more striking ($45,390 for prosecuted cases, compared to $8,458 for the investigation sample). This suggests that fires causing very serious damage are particularly likely to result in prosecution. This appears to be especially

[1] Dollar loss estimates were available for most fires in all sites except the Bronx, where such estimates were made so infrequently that no analysis was possible.

true in Cleveland, where the mean dollar loss was $86,775 for prosecuted cases. (This finding is supported by the discussion of prosecutorial screening criteria in Chapter 5.) Although these data suggest that many of the cases reaching prosecution involve serious fires, there is no evidence that these characteristics make prosecution more difficult. In fact, it may be easier to convince a jury to return a conviction if the fire caused severe damage.[1] Several prosecutors have noted that juries and judges are sometimes reluctant to convict if little actual damage was caused by a fire, even if there was great potential for harm to life or property. Judges may be concerned about the court time and resources "wasted" by trial of a case involving a minor fire.

This chapter is organized as follows: it describes the basic steps in the felony prosecution process; presents an overview of evidence characteristics in all prosecuted arson cases; analyzes the characteristics, outcomes, and evidence patterns of arson cases reaching trial; discusses the problems that can arise in proving each key element of an arson case (with emphasis on cases reaching trial); and concludes with a consideration of organizational approaches to arson prosecution.

The major findings presented in the chapter are as follows:

- Among all sampled prosecutions, the presence of direct evidence of the defendant's commission of arson (eyewitness testimony or a confession) is the only factor that distinguishes convictions from non-convictions.
- Almost two-thirds of the convictions rested on direct evidence and about one-third on circumstantial evidence. This is somewhat surprising in view of the common opinion that arson cases are overwhelmingly circumstantial in character; at the same time, it shows that convictions can be obtained in circumstantial arson cases.
- As with most felonies, the vast majority of arson convictions result from pleas of guilty.
- Contrary to findings from studies of other felonies or all felonies, the evidence is generally weaker in arson cases going to trial than in arson cases disposed of by pleas.

[1] One prosecutor noted that videotape, slides, and photographs can all be used to convince juries of the seriousness of a fire.

- Arson cases involving serious fires (death, injury, and/or high dollar loss) are more likely to go to trial than cases involving minor fires.
- Arson defendants going to trial are nearly twice as likely to be convicted than to be acquitted on the merits of the case; still, the 58 percent trial conviction rate is substantially lower than the overall defendant conviction rate--78 percent; indeed, in the Bronx, Denver, and San Diego, about one-half of all trial defendants were acquitted.
- Witness problems, defense expert testimony on cause and origin, direct evidence of the defendant's commission of arson, and evidence of motive serve best to distinguish acquittals from convictions at arson trials.
- Although evidence of incendiary origin does not receive significant attention during follow-up investigation or prosecutorial screening, this element can cause real problems in arson cases reaching trial, particularly as the defense bar becomes more skillful and aggressive. Prosecutors should be particularly concerned to make their court presentations of the often-complex issues of fire cause and origin as clear and intelligible as possible, making use of diagrams, photographs, and videotapes whenever possible.
- Proving incendiary origin can be rendered easier by using an investigator familiar with the case, or at least generally familiar with cause and origin determination, as an advisory witness who attends the trial and advises the prosecutor on technical issues.
- While motive evidence is not a legal element of proof in arson cases, it is considered by prosecutors to be an important ingredient in rendering cases intelligible to juries and one whose absence or weakness can cause serious problems at trial. Prosecutors should pay careful attention to developing motive evidence that is convincing and plausible as possible; direct statements establishing motive are preferable to complex inferences from documents and records.
- Degree of exclusivity is the key factor in establishing a defendant's opportunity to commit arson. However, in many arson cases reaching trial, the evidence of opportunity rests on testimony that can be undermined by identification problems, alibis, and complex issues of timing.

- Physical evidence tying the defendant to the fire scene is rarely available in arson cases.
- Problems of witness availability and reliability often undermine arson cases reaching trial.
- Although analysis of conviction rates does not point to the superiority of any one structure of arson prosecution, anecdotal evidence and interview data suggest that a "specialized screening/hybrid prosecution" system is preferable. Under this system, a specialized attorney or unit screens all arson cases, handles vertically those posing complex or technical issues and passes the rest on to the normal felony processing stream. This "hybrid" approach seems to offer the best of both worlds: specialization and efficiency.
- In considering each of the findings and recommendations regarding arson cases reaching trial, one important fact must be borne in mind: juries are unpredictable--the best organizational structure and the best developed and presented evidence cannot absolutely guarantee conviction.

6.1 Overview of the Prosecution Process

There are similarities in felony case processing in the four study jurisdictions.[1] Almost all cases are initiated by filing charges in a lower court with jurisdiction over misdemeanors and the determination of probable cause in felony cases. (Although prosecutors generally have the option of bypassing the lower court and filing a felony charge directly in the court of general trial jurisdiction by obtaining a grand jury indictment, this rarely occurs and is typically limited to complex fraud arson cases.) Proceedings in the lower court include an initial appearance by the defendant, at which time he or she is advised of the pending charges and issues such as bail and appointment of a defense attorney are addressed as necessary. If a preliminary hearing is to be held, it occurs at this level as well.

---

[1] The brief summary provided here is not intended to be an exhaustive treatment of the intricacies of criminal case processing in each jurisdiction. Instead, this overview is intended to introduce the basic steps in the process and provide a common frame of reference for all readers. Of the 471 defendants in this study, only six percent were charged solely with misdemeanors; all of the others were charged with at least one count of a felony.

The most dramatic difference among the study sites concerns the extent to which a single case is handled by several different prosecutors and the timing of the involvement by the attorney who ultimately disposes of the case. Even in the sites with specialized arson prosecution, the designated arson prosecutor may not always be involved in the proceedings at the lower court level. In San Diego, the decision to handle a case vertically from beginning to end is made at the time of screening. (In the past, almost all cases were considered for vertical prosecution. Under a newly instituted system, as described in Chapter 5, only cases meeting certain criteria receive this consideration.) Thus, not all arson preliminary hearings are conducted by the attorney assigned for trial. In the Bronx, arson prosecutors are not involved in the initial appearance but do handle cases at the preliminary hearing, if one is held. However, tactical considerations--such as the desire to avoid providing the defense with early discovery--often lead prosecutors in the Bronx to obtain a grand jury indictment as soon as possible, thus bypassing the preliminary hearing. In Denver, which also operates on a predominantly vertical model of prosecution, the attorney assigned to try an arson case is also responsible for the preliminary hearing.

The trial prosecutor enters the case latest in the process in Cleveland. Cleveland has a two-tiered court system with two separate prosecutor's offices. As noted in Chapter 5, the police prosecutor screens all felony cases and represents the state at the preliminary hearing. Once a determination has been made that there is probable cause to bind the case over for indictment, the case is transferred to a grand jury unit within the Cuyahoga County Prosecuting Attorney's Office. The trial attorney does not receive the case until after an indictment has been returned.

Particularly if the jurisdiction maintains a horizontal system of prosecution, cases may be disposed of in several ways early in the judicial process and may never reach the prosecutor assigned to try the case. For example, cases may be dismissed at the preliminary hearing for lack of probable cause and, in a system like Cleveland's, never reach the trial prosecutor.[1] Cases may also be terminated very early in the process as a

[1]Typically, such cases can be refiled, but this is generally reserved for instances in which new evidence is discovered or previously unavailable evidence becomes accessible. In our study, we did not find any instances of dismissed cases being refiled.

result of a determination that the defendant is mentally incompetent to stand trial. Findings of mental incompetency or lack of probable cause are judicial decisions based on the law and the facts of the individual case.

Cases may also be terminated through prosecutorial discretion, although this is typically exercised only by the trial prosecutor. At any point after a decision has been made to file charges, a prosecutor can decide to dismiss the case.[1] Such a decision may be motivated by changes in the nature or quality of the evidence (e.g., a witness leaves the jurisdiction or physical or testimonial evidence is suppressed). It may also reflect altered priorities for a case (e.g., if the defendant has cooperated in another prosecution or has recently received a prison sentence in another case that far exceeds the penalty possible for the arson).

Some of the same factors may also influence plea negotiation, another discretionary form of case disposition. Differences in the division of responsibility at each stage of case processing, as well as variations in local policies, affect the timing of plea negotiations. In Cleveland, no negotiation can take place until after the indictment is returned and the trial prosecutor becomes involved in the case. The policy in the Bronx is in direct contrast: assistant district attorneys are not permitted to take a plea in a case following indictment. However, since the same attorney is involved in all proceedings in arson cases (following the initial appearance), these negotiations can occur quite early in the process. Similarly, in the Bronx and in Denver, once a plea agreement has been reached, case processing is simplified by permitting a defendant to waive the formal determination of probable cause (by the preliminary hearing in Colorado and by the grand jury in New York). Such cases can be disposed of at a very early stage. Ultimately, cases not terminated by negotiated plea, dismissed by the court, or dismissed by the prosecutor must go to trial.

This chapter compares cases resulting in conviction to those with dispositions involving no conviction.[2] It is important to bear in mind

[1]In the Bronx, the option to dismiss a case is not open to prosecutors except in unusual circumstances. Office policy in most instances prohibits dismissing cases and requires taking them to trial.

[2]In Denver, "deferred judgment" and "deferred prosecution" are common methods of case disposition. These are classified as convictions resulting from pleas, since the defendant acknowledges commission of the offense in return for a period of informal probation.

throughout this discussion that these outcomes should not be used as indicators of "success" or "failure" in arson adjudication. Winning a conviction in a case when the defendant is innocent is clearly not a success but a failure of the judicial process. Moreover, the cessation of judicial proceedings when the defendant is mentally incompetent to participate in or understand the criminal justice process does not constitute a failure merely because no conviction was obtained. In theory, the best measure of success would be whether "justice" was done. As this is clearly not a quantifiable outcome, we will retain the conviction/non-conviction dichotomy for analysis, but only in the context of these qualifications.

6.2 Arson Prosecutions: Outcomes and Evidence Patterns

Since cases reaching prosecution have already been screened at the investigative level prior to their acceptance for prosecution, it is logical to expect that only the strongest cases would survive to this stage. The high overall conviction rate would also suggest that the evidentiary merit of prosecuted cases is very strong. The figures and discussion presented in Chapter 5 have confirmed this expectation. As shown in Table 5.1 (above), 61 percent of the cases acceptable for prosecution included direct evidence of the defendant's commission of arson (in the form of a confession or eyewitness testimony), while over 90 percent of the cases had evidence of the defendant's opportunity to commit the arson. About three-fourths of the prosecuted cases included evidence of the fire's incendiary origin and/or evidence of motive. Table 6.1 arrays the outcomes of the prosecuted cases by the presence of these key evidence types (and some of their subcategories). These figures show that presence of direct evidence is the only factor distinguishing between convictions and non-convictions and reconfirms the general notion that arson cases accepted for prosecution are very strong. In terms of evidence of incendiary origin, motive, and opportunity, there is very little to choose from between convictions and non-convictions. Both sets of cases are extremely strong in these categories.

Sixty-four (64) percent of the convictions rested on a confession or eyewitness testimony, while 36 percent were based on circumstantial evidence. This is somewhat surprising in light of the reputation of arson cases as overwhelmingly dependent on circumstantial evidence. At the same time, this breakdown demonstrates that convictions <u>are</u> often obtained solely on the basis of circumstantial evidence.

Table 6.1

Outcomes of Prosecuted Cases (Augmented Prosecution Sample) by Key Evidence Types Present

Evidence Type[b]	Percent of Cases in Outcome Category[a] with Evidence Present				
	No Conviction (n = 85)	Any Conviction (n = 323)	Non-Arson Conviction (n = 73)	Reduced Arson Conviction (n = 131)	Highest Arson Conviction (n = 119)
1. Evidence of Incendiary Origin	81	77	62	82	82
2. Evidence of Motive	71	76	72	76	78
3. Evidence of Opportunity	92	91	90	94	87
a) Suspect/Defendant Seen Entering/Leaving Scene	84	78	79	76	81
4. Direct Evidence of Suspect's/ Defendant's Commission of Arson	47	64	66	73	55
a) Eyewitness to Commission of Arson	21	30	37	31	24
b) Confession	31	46	42	55	39

[a] Cases were categorized according to the highest level of conviction of any defendant in the case.

[b] For definitions of evidence types, see Table 4.6, notes a-f.

These basic findings concerning prosecuted cases are confirmed and amplified by Table 6.2, which depicts outcomes of the prosecuted cases by various evidence combinations, and Table 6.3 which displays outcomes of cases in which a defendant was charged with actually setting a fire (as opposed to hiring someone else to do so) by categories of evidence linking that defendant to commission of the arson. Again, the major difference between cases resulting in conviction and cases resulting in no conviction appears to be in the area of direct evidence. Both Tables 6.2 and 6.3 show that less than half of the non-convictions included direct evidence, while about two-thirds of the convictions had this type of evidence.

Table 6.2 reveals that 16 percent of the convictions were won in cases which lacked direct evidence but had all three key elements of a circumstantial case--evidence of the incendiary origin of the fire, motive, and opportunity (Category 2). This is not a particularly large percentage but its importance is enhanced when one considers that <u>two-thirds</u> of the "Category 2" cases resulted in some conviction. Fully 80 percent of the convictions were based either on direct evidence or on the presence of all three key circumstantial elements. The remaining convictions are scattered among the other circumstantial evidence combinations shown in Table 6.2.

All three tables in this section suggest an interesting--and somewhat surprising--relationship between evidence types present in a case and <u>level</u> of conviction. Convictions on the <u>highest arson charge</u> filed are based more frequently than reduced arson and non-arson convictions on circumstantial evidence: just over one-half of the "highest arson" convictions included direct evidence, while almost three-fourths of the reduced arson convictions had direct evidence. This point appears to gain support from a statement made by one prosecutor interviewed in the course of this study who argued that multi-faceted circumstantial cases are often easier to win than cases resting solely on an identification by a single witness--even an eyewitness to arson. It is difficult to confirm or disprove this view based on our study data because so much depends on the <u>quality</u> of the evidence and on the judgment of juries; our data reveal only what evidence types are documented in the case files. Clearly, well-rounded circumstantial cases and cases with direct evidence can go either way depending on the credibility of a particular witness or the strength or weakness of any one link in the evidentiary chain.

Table 6.2

Outcomes of Prosecuted Cases (Augmented Prosecution Sample) by Evidence Combination/Type Present

Evidence Type[b]	Percent of Cases in Outcome Category[a] with Evidence Present: No Conviction (n = 85)	Any Conviction (n = 323)	Non-Arson Conviction (n = 73)	Reduced Arson Conviction (n = 131)	Highest Arson Conviction (n = 119)
1. Direct Evidence of Suspect's/ Defendant's Commission of Arson	47	64	66	73	55
2. No Direct Evidence/All of the following: Evidence of Incendiary Origin, Motive, and Opportunity	18	16	11	15	21
3. No Direct Evidence/No Motive Evidence/Both of the following: Evidence of Incendiary Origin and Opportunity	18	7	5	7	8
4. No Direct Evidence/No Opportunity Evidence/Both of the following: Evidence of Incendiary Origin and Motive	8	2	0	1	4
5. No Direct Evidence/No Evidence of Incendiary Origin/Both of the following: Evidence of Motive and Opportunity	6	5	10	3	4
6. No Direct Evidence/One of the following: Evidence of Incendiary Origin, Motive, or Opportunity	3	5	8	1	8
TOTAL	100	100	100	100	100

[a] Cases are categorized according to the highest level of conviction of any defendant in the case.

[b] For definitions of evidence types, see Table 4.6, Notes a-f.

Table 6.3

Outcomes of Prosecuted Cases (Augmented Prosecution Sample) in Which a Defendant was Alleged to Have Actually Set a Fire, By Nature of Evidence Linking Defendant to Commission of Arson

Case Category	Nature of Evidence[b]	Percent of Cases in Outcome Category[a] with Evidence Present: No Conviction (n = 83)	Any Conviction (n = 310)	Non-Arson Conviction (n = 73)	Reduced Arson Conviction (n = 129)	Highest Arson Conviction (n = 108)
1. Direct Linkage	Direct Evidence of Suspect's/Defendant's Commission of Arson	48	67	66	74	59
2. Circumstantial Linkage	Evidence of Opportunity/No Direct Evidence of Suspect's/Defendant's Commission of Arson	46	33	33	26	40
3. No Linkage	No evidence of Opportunity/No Direct Evidence of Suspect's/Defendant's Commission of Arson	6	1	1	0	1
TOTAL		100	100	100	100	100

[a] Cases are categorized according to the highest level of conviction of any defendant in the case.

[b] For definitions of evidence types, see Table 4.6, Notes c and e.

As already noted, the overall arson conviction rates found in this study are extremely high. The vast majority of the convictions resulted from pleas of guilty. While this section demonstrates that the evidence in the cases ending in convictions was generally very strong, guilty pleas may occur for reasons not entirely dependent on the evidentiary strength of a case. Prosecutors' and defendants' decisions to offer or enter a plea, as part of a negotiated outcome, involve each side's balancing the perceived chances of conviction on the highest charge filed should the case go to trial against the desirability of conviction on a reduced charge with a lighter sentence. Pleas may also occur for largely extraneous reasons relating to other prosecutions. In short, while evidentiary strength certainly is the most important factor in producing guilty pleas, it is by no means the only factor.

At the same time, considerations other than evidentiary strength (e.g., agreements for a defendant to plead guilty in one case in return for dismissal of another) may influence dismissals, determinations of mental incompetency, and certain other non-conviction outcomes. It appears that the purest way to relate evidence to outcomes is to focus on cases going to trial. This is the subject of the next section.

6.3 Arson Trials: Outcomes, Case Characteristics, and Evidence Patterns

6.3.1 Outcomes

Arson defendants going to trial are nearly twice as likely to be convicted than to be acquitted on the merits of the case. Table 6.4 shows that 58 percent of these defendants were convicted on some charge and 31 percent were acquitted, while 11 percent were found not guilty by reason of insanity. Still, the 58 percent conviction rate at trial is substantially lower than the overall conviction rate: 78 percent of all defendants. The discrepancy is particularly strong in the Bronx, Denver, and San Diego where about one-half of trial defendants were acquitted. The high acquittal rate found in the Bronx is not altogether surprising in view of the stated office policy against dismissing even weak cases after indictments are returned. (Taking more cases to trial is a strategy intended to convince other defendants to plead guilty.) Cleveland is the only study site in which the trial conviction rate and overall conviction rates are comparable. Thus, at least for three of the four study sites, part of the conventional wisdom on arson

Table 6.4

Outcomes of Defendants at Trial by Site

(Augmented Prosecution Sample)

Outcomes	Percent of Cases in Outcome Category				
	Bronx (n=25)	Denver (n=6)	San Diego (n=14)	Cleveland (n=20)	All Sites (n=65)
Guilty-Non-Arson Charges	16	0	7	10	11
Guilty-Reduced Arson Charges	4	17	0	0	3
Guilty-Most Serious Arson Charge Alleged	36	33	35	65	45
SUBTOTAL: Convictions	56	50	42	75	58
Conviction Rate:[a] All Prosecuted Defendants	79	74	80	78	78
Not Guilty-All Charges-Insanity	0	17	29	10	11
Not Guilty-All Charges-No Insanity	44	33	29	15	31
TOTAL	100	100	100	100	100

[a] Conviction on any charge.

prosecution may be true: it does appear to be somewhat difficult to win convictions in arson cases if they go to trial. As discussed in Chapter 3, the discrepancies in the study sites between trial conviction rates and overall conviction rates cannot be attributed simply to prosecutorial screening or trial policies. They appear to reflect an inherent difficulty of obtaining convictions in arson cases reaching trial.

6.3.2 Case Characteristics

As noted in Chapter 3, analysis of data on outcomes in other felony cases suggests that the discrepancy between trial conviction rates and overall conviction rates in arson cases is unusual. Also unusual, but not surprising in view of the discrepancy in conviction rates, is the fact that the evidence is generally somewhat weaker in arson cases going to trial than in arson cases disposed of by pleas of guilty. A recent study of prosecutorial decisionmaking by Jacoby et al. suggests that, for all types of criminal cases, those going to trial are likely to be stronger than those ending in pleas.[1] Table 6.5 shows that direct evidence of the defendant's commission of arson (a confession or eyewitness testimony) is more often present in cases disposed of by pleas than in cases going to trial. Cases going to trial are thus more likely to be based on circumstantial evidence (Categories 2-6 in Table 6.5).

Jacoby et al. also found that cases involving serious offenses were more likely to go to trial and those involving minor offenses were more likely to end in pleas.[2] At least insofar as it applies to degrees of seriousness within crime categories, our findings are in accord with Jacoby's. Arson cases going to trial were more likely to involve death or injury than those resolved by plea (18 percent compared to nine percent). Cases involving fires with higher dollar loss were also more likely to go to trial. Although 80 percent of all prosecuted arsons for which dollar loss estimates were available involved damage of $10,000 or less, only 55 percent of the trial cases fell into that category. At the other end of the scale, it is interesting to note that while few fires in our sample caused more than $100,000 damage, 13 percent of the trial caseload involved such fires, as opposed to two percent of the cases closed by plea.

---

[1] Joan Jacoby, et al., Prosecutorial Decisionmaking: A National Study, (U.S. Department of Justice, National Institute of Justice, 1982), p. 40.

[2] Ibid, p. 40.

Table 6.5

Defendants Disposed by Pleas and Defendants Going to Trial (Augmented Prosecution Sample) by Evidence Combination/Type Present

Evidence Type[a]	Percent of Defendants Disposed by Plea With Evidence Present (n = 329)	Percent of Defendants Going to Trial With Evidence Present (n = 65)
1. Direct evidence of Suspect's/Defendant's Commission of Arson	60	49
2. No Direct Evidence/All of the following: Evidence of Incendiary Origin, Motive, and Opportunity	19	20
3. No Direct Evidence/No Motive Evidence/Both of the following: Evidence of Incendiary Origin and Opportunity	8	11
4. No Direct Evidence/No Opportunity Evidence/Both of the following: Evidence of Incendiary Origin and Motive	2	11
5. No Direct Evidence/No Evidence of Incendiary Origin/Both of the following: Evidence of Motive and Opportunity	5	6
6. No Direct Evidence/One of the following: Evidence of Incendiary Origin, Motive, or Opportunity	6	3

[a] For definitions of evidence types, see Table 4.6, Notes a-f.

6.3.3 Evidence Patterns

Tables 6.6, 6.7, and 6.8 display the trial outcomes by evidence types and combinations. Table 6.6 shows that among the key evidence categories, direct evidence and motive evidence serve best to distinguish between convictions and acquittals at trial.

The importance of direct evidence comes out even more clearly in Table 6.8, which focuses on those defendants accused of actually setting a fire. Only 32 percent of the acquitted defendants, as opposed to 67 percent of the convicted defendants, were confronted with such evidence. Another way of looking at this is that only 43 percent of defendants faced with evidence linking them circumstantially to commission of the arson (i.e., evidence of opportunity) were convicted at trial; in contrast, 65 percent of the trial defendants faced with direct evidence were convicted.

The apparent importance of motive evidence revealed in Table 6.6 is congruent with statements by several prosecutors interviewed in the course of this study that this was sometimes the missing element in arson cases resulting in acquittal. In Section 6.4, we present several examples of such cases.

Table 6.7 shows that almost one-third of the acquittals occurred in cases possessing all three key elements of a circumstantial arson case: evidence of incendiary origin, motive, and opportunity. The following example shows how a skillful and aggressive defense attorney can undermine all three of these elements at trial and thus win an acquittal in what appeared to the prosecutor to be a strong case:

> A businessman suffered a fire in his store and was charged with arson. Investigators found traces of an accelerant and produced photographs supporting this conclusion. To show motive, the prosecution produced evidence that the defendant was behind in his rent and that his business was showing a loss. The defendant admitted to being in the store shortly before the fire started, but claimed that he had left to do an errand. However, the prosecution attempted to establish opportunity by showing that his alibi statement was not consistent with the known operating hours of the grocery store he claimed to have visited.
>
> The defense was able to create doubts on each of these three issues. Countering the suggestion that the fire had started through use of an accelerant, the defendant introduced testimony that his son had brought a "moped" into the store to repair a fuel leak, and that fuel had spilled in several spots throughout

Table 6.6

Outcomes of Trial Defendants (Augmented Prosecution Sample), by Key Evidence Types Present

Evidence Type[a]	Percent of Acquitted Defendants[b] With Evidence Present (n = 20)	Percent of Convicted Defendants[c] with Evidence Present (n = 38)
1. Evidence of Incendiary Origin	85	84
2. Evidence of Motive	65	84
3. Evidence of Opportunity	85	84
a) Suspect/Defendant Seen Entering/Leaving Scene	85	76
4. Direct Evidence of Suspect's/ Defendant's Commission of Arson	30	55
a) Eyewitness to Commission of Arson	20	26
b) Confession	15	39

[a] For definition of evidence types, see Table 4.6, Notes a-f.

[b] Excludes defendants found not guilty by reason of insanity (n=7).

[c] Convicted on any charge.

Table 6.7

Outcomes of Trial Defendants (Augmented Prosecution Sample), by Evidence Combination/Type Present

Evidence Type[a]	Percent of Acquitted Defendants[b] With Evidence Present (n = 20)	Percent of Convicted Defendants[c] with Evidence Present (n = 38)
1. Direct evidence of Suspect's/Defendant's Commission of arson	30	55
2. No Direct Evidence/All of the following: Evidence of Incendiary Origin, Motive, and Opportunity	30	19
3. No Direct Evidence/No Motive Evidence/Both of the following: Evidence of Incendiary Origin and Opportunity	15	5
4. No Direct Evidence/No Opportunity Evidence/Both of the following: Evidence of Incendiary Origin and Motive	15	11
5. No Direct Evidence/No Evidence of Incendiary Origin/Both of the following: Evidence of Motive and Opportunity	10	5
6. No Direct Evidence/One of the following: Evidence of Incendiary Origin, Motive, or Opportunity	0	5
TOTAL	100	100

[a] For definitions of evidence types, see Table 4.6, Notes a-f.

[b] Excludes defendants found not guilty by reason of insanity (n = 7).

[c] Convicted on any charge.

Table 6.8

Outcomes of Trial Defendants (Augmented Prosecution Sample) Alleged to Have Actually Set a Fire,[a] By Nature of Evidence Linking Defendant to Commission of Arson

Case Category	Nature of Evidence[b]	Percent of Acquitted Defendants[c] With Evidence Present (n = 19)	Percent of Convicted Defendants[d] with Evidence Present (n = 30)
1. Direct Linkage of Suspect/ Defendant to Arson	Direct Evidence of Suspect's/Defendant's Commission of Arson	32	67
2. Circumstantial Linkage of Suspect/ Defendant to Arson	Evidence of Opportunity/No Direct Evidence of Suspect's/ Defendant's Commission of Arson	58	33
3. No Linkage of Suspect/ Defendant to Arson	No evidence of Opportunity/No Direct Evidence of Suspect's/ Defendant's Commission of Arson	10	0
TOTAL		100	100

[a] That is, excludes cases in which the suspect/defendant was accused of hiring someone else to set the fire.

[b] For definitions of evidence types, see Table 4.6, Notes c and e.

[c] Excludes defendants found not guilty by reason of insanity (n = 7).

[d] Convicted on any charge.

the store. Secondly, the defendant admitted that the original alibi he had given the investigators was not true, but claimed to have a legitimate explanation. The defendant claimed to have been afraid to tell investigators that he had had a few drinks before the fire. Moreover, because of his drunken condition, he had incorrectly identified the grocery store where he had been when the fire broke out (in fact, that store was closed at the time of the fire). At his trial, the defendant revised his story, claiming to have visited a different grocery store which had in fact been open at the crucial time. Finally, the defense lawyer--who was also an accountant--was able to rebut the motive evidence by suggesting that rent had been deliberately and rightfully withheld because of a dispute with the landlord, and that the apparent financial loss was a paper loss shown for tax purposes. Faced with contradictory evidence on all key issues, the jury acquitted the defendant.

6.3.4 Multivariate Analysis

To examine the measurable factors related to outcome in arson cases going to trial, we performed a regression analysis relating outcome (convictions versus non-convictions, excluding cases in which the outcome was not guilty by reason of insanity[1]) to various case characteristics. The regressions were conducted at the individual defendant level, and the independent variables included the basic evidence types used in earlier analyses, as well as variables indicating whether the defense had an alibi witness or an expert witness providing an alternative explanation of the fire's cause and origin. Also included was a variable to distinguish fraud cases from other arsons.[2]

Two sets of regressions were run. The first included all 58 defendants whose cases went to trial. The second included only those 49 defendants accused of actually setting the fire, as opposed to hiring someone else to do so. Results for both equations are displayed in Table 6.9. Looking first at the data on all defendants, we note that the existence of a witness problem

---

[1] This was because a finding of not guilty by reason of insanity is a different type of outcome from a straight acquittal. It is based on consideration of an entirely different type of evidence: evidence as to the defendant's mental state when the act was committed rather than evidence as to whether the crime was committed by the defendant.

[2] Further details on the regressions may be found in Appendix A.

Table 6.9

Regression Analysis of Defendants Going to Trial
Dependent Variable = Conviction, Any Charge

Independent Variable	All Defendants	Defendants Accused of Actually Setting a Fire
Intercept	.56	-.08
Fraud Case	-.09	-.21
Evidence of Incendiary Origin	-.09	.03
Evidence of Motive	.26+	.25+
Evidence of Opportunity	.02	.55
Direct Evidence of Defendant's Commission of Arson	.25+	.24+
Witness Problems	-.53**	-.50**
Defense Alibi Witness	-.29	-.20
Defense Expert Witness on Cause and Origin	-.40*	-.30
R^2	.328	.407
n	58[a]	49

Statistical significance is indicated as follows:

\+ = $p \leq .10$

* = $p \leq .05$

** = $p \leq .01$

[a] Excludes defendants found not guilty by reason of insanity (n=7).

(witness refused to testify, was otherwise unavailable, or was deemed unreliable) had the largest and most statistically significant impact on the likelihood of conviction. The existence of a defense expert witness with an alternative explanation of fire cause and origin also appeared to reduce substantially the likelihood of conviction. Of the evidence categories tested, evidence of motive and direct evidence linking the defendant to commission of the arson (confession or eyewitness) are marginally significant.

The overall value for R^2 of .328 is respectable, but still leaves the majority of variation in case outcome unexplained. Given the relatively weak impact of variables indicating presence of evidence types, along with the overall high frequency of these factors in the cases that reach trial, it appears more likely to be the quality of the evidence that makes or breaks the case at the trial stage.

Turning to the analysis limited to defendants accused of actually setting a fire, the overall pattern is quite similar, which is not surprising, since these cases comprise most of the total sample. However, there is one striking difference. The coefficient of opportunity evidence has increased from .02 to .55, although it still fails to achieve statistical significance. Moreover, the R^2 increases from .328 to .407. Taken together, these facts suggest a somewhat greater role of the evidence type variables for defendants accused of actually setting the fire than for those defendants who hire a torch.

In part, this greater role can be explained by the greater relevance of opportunity evidence in cases involving firesetters. However, it may also be the case that perpetrators of fraud are more sophisticated (and can obtain better legal defense) so that they are able to cast doubt on the evidence. The fact that the coefficient of alternative cause-and-origin explanation is less negative for defendants accused of actually setting a fire suggests that defendants accused of hiring a torch as part of fraud arson schemes may be able to put on stronger legal defenses.

As described in Section 6.2, a conviction may not result even when the prosecution is able to present evidence on all three key components of a circumstantial case: evidence of incendiary origin, motive and opportunity. The regression analysis described above suggests that case outcome at trial may turn more on the quality of evidence than the mere presence or

absence of evidence types. The following section discusses the key evidentiary components of an arson case--with particular attention to problems arising in cases reaching trial--and provides illustrations of the importance of each component to case outcomes.

6.4 Proving an Arson Case

To prove the crime of arson, evidence must be introduced to establish that the fire was incendiary, that the defendant was the responsible party, and that he or she acted with the level of intent required by the governing statute. With the exception of statutes directed specifically at arson to obtain insurance proceeds (which involve motive as part of the mental element of intent), arson statutes generally do not include motive as an element that must be proven for a prima facie case. However, due to the importance ascribed to motive evidence as part of a circumstantial case, it will be included in the discussion below, along with the legally required elements of proof. In addition, a section is devoted to a discussion of the impact of problems with availability and credibility of witnesses.

6.4.1 Establishing Incendiary Origin

Proving the incendiary nature of a fire is an important first step in an arson case but, as described earlier, it appears in most instances to have little impact on the follow-up investigation or on screening for prosecution. On occasion, however, the cause and origin of the fire may prove to be a major issue once a case reaches court. A specialized arson prosecutor may have an advantage in handling cases with problems in establishing the incendiary origin of the fire. This point was highlighted in interviews in sites with arson specialization as well as those without specialization. Commenting on the benefits of a specialized prosecution system, one investigator in San Diego stated that the arson prosecutor "knew the right questions to ask" about fire cause and origin investigations. In contrast, one prosecutor in Cleveland (who had handled only one arson case in the past year) noted the difficulty in refamiliarizing himself with the technology and terminology of arson determination each time he was assigned an arson case. The disadvantage of a non-specialized structure in handling arson prosecutions may be more the inefficiency in prosecutors' relearning certain crime-specific

elements and procedures than their inability to master and make effective use of evidence on the technical aspects of arson.

In all study sites, fire investigators appear to be readily certified by the courts as expert witnesses permitted to testify on the cause and origin of fires. It is unclear how often reports of laboratory analysis are introduced in court but, as noted in Chapter 4, documented requests for such analysis were found only infrequently in investigative files. Moreover, there appears to be few, if any, problems with the chain of custody of physical evidence in the sampled prosecutions, despite the frequent mention of this issue in the literature on arson prosecution. In one site, investigators reported that convictions had been obtained in cases in which laboratory analysis had produced no evidence of accelerants, even when the negative results were revealed in court. One case resting solely on the investigator's testimony is described below:

> Samples of fire debris had been collected in the case, but investigators were unable to have the material tested, since the gas chromatograph was out of commission. During cross-examination at the preliminary hearing, the investigator was asked whether there was additional evidence to support his opinion of the fire's cause. He had to admit that there was "no scientific evidence . . . that [the fire] was caused by a flammable liquid." However, this proved not to be a problem either at the preliminary hearing or at the trial. The investigator was able to present effectively his observations that the characteristics of the fire on the bed--a "fast burn" in which all material was consumed, but the springs were intact with tension remaining in them--and the buildup of sooty residue on the walls--indicated that an accelerant had been used. The jury returned a verdict of guilty in the case.

Because of the often complex technical nature of evidence on incendiary origin, it is critical that prosecutors present their cases as clearly and logically as possible and that they be able to counter effectively the theories of fire cause proposed by defense experts. Several strategies are of value in this area. First, the use of photographs, diagrams, and even videotapes graphically portraying the prosecutor's theory of incendiary origin can be extremely useful in rendering the evidence intelligible to juries. (Of course, it is important that photographs chosen for presentation conclusively show what the prosecutor says they show and that the charts prepared are clear and understandable to the jury.)

Second, proving the incendiary origin of the fire can be rendered somewhat easier by the use of an investigator familiar with the case as an advisory witness, who attends the trial and provides advice to the prosecutor on technical issues throughout the presentation of evidence. This strategy has proven beneficial under specialized as well as non-specialized prosecution structures, particularly in cases where the defense presents its own expert on fire cause determination. In some jurisdictions, the use of advisory witnesses is subject to legal challenge. If the defense can move to exclude all potential witnesses from the courtroom on the theory that they might be influenced by hearing any other testimony, advisory witnesses might be disallowed. In some jurisdictions, this issue has been resolved in favor of the use of advisory witnesses. However, continued use of advisory witnesses is in jeopardy in California, following a recent court decision. A potential method of circumventing this problem when it arises and still providing some technical assistance to the prosecutor might be to use as an advisory witness another expert on cause and origin rather than the specific investigator involved in the case at trial.

The defense attorney's level of expertise is a factor which can either make it easier or more difficult for the prosecutor to establish the incendiary origin of the fire. Several prosecutors noted that the defense bar is becoming increasingly skilled in arson cases. There are several good examples in our sample of cases in which an aggressive defense was able to undermine the prosecution's evidence of incendiary origin.

One case involved a fire in forest land. The defense attorney focused on the possibility of an accidental cause and was able to force the investigator to admit on the witness stand that the fire could have started when the defendant accidentally dropped a match.[1] The prosecutor handling this case felt that juries often have a difficult time comprehending negative corpus evidence in arson cases--that is, evidence regarding the elimination of accidental causes. Without clear physical or testimonial evidence on the exact cause of the fire, this prosecutor argued, juries sometimes search for

[1] One arson investigation unit manager voiced the opinion that the most difficult arson cases in which to obtain convictions are those where the defendant admits starting the fire but claims that it was accidental.

a way to attribute the fire to accidental causes. He found that juries were particularly willing to attribute fires to cigarettes even in the face of contradictory expert testimony and scientific studies showing the improbability of a discarded cigarette starting a fire. In one case, a defense attorney was able to elicit testimony from a resident of a burned apartment that she was a chain-smoker, had had several cigarettes before leaving the apartment, and could not precisely recall when or where she had extinguished each cigarette. Given the absence of any evidence of an accelerant, the prosecutor realized that the defense had seriously damaged his case. This and other problems in the case combined to convince the jury to acquit the defendant. To this special arson prosecutor, anticipated problems in establishing the incendiary origin of a fire contributed strongly to his decision to attempt negotiation of a plea bargain.

In addition to casting doubts on the prosecution's expert witnesses, the defense may rely on its own expert to introduce an alternative theory of the fire's cause and origin:

> In a large fire which started in the basement of a department store, fire department investigators testified that burn patterns indicated the fire originated in an area where the defendant had been seen prior to the fire. The defense put on an expert who testified that the fire started in an elevator shaft and was caused by a defective motor. His interpretation of the burn patterns contradicted that of the fire department investigators. Although the prosecution presented evidence from another expert that the motor was not defective, the jury was not convinced. The contradictory evidence on the fire's cause and origin, coupled with testimony on the timing of events which raised additional doubts, led to the jury's acquittal of the defendant.

On the other hand, cases with weaknesses in the cause and origin determination may still result in conviction if the defense attorney fails to raise doubts about the state's explanation of the fire. The following example describes one such case:

> The defendant had moved temporarily from her dwelling as a result of problems with neighbors and financial difficulties. The defendant admitted being in the dwelling approximately 15 to 20 minutes before the fire to determine whether it was secure. She admitted that the fire might have been caused by a dropped cigarette lighter. Indeed, the defendant had been involved in previous fires that started the same way. There was no evidence regarding the presence of accelerants.

> Although the case ended in conviction, the prosecutor suggested in an interview that the outcome might have been different with a more knowledgeable defense attorney who could have exploited the lack of evidence as to accelerants and stressed the possible accidental cause for the fire.

6.4.2 Proving Intent

In addition to proving that the fire was set, the prosecution bears the burden of proof in establishing the mental element of the crime--the defendant's intent. As discussed in Chapter 2, state statutes vary in their requirements concerning intent. For instance, in California the penalty is greatest for "willful and malicious" firesetting, compared to "reckless" actions. In some other states, intent is defined not in relation to the act of setting the fire but in relation to the harm to property. Other aspects of intent may involve the necessity of proving actual or constructive knowledge that the burned premises were occupied or used as a dwelling.

In some circumstances, fires originally set for a legitimate purpose get out of control and spread, causing considerable damage and raising the issue of whether they meet the intent requirement for arson. Fires set to create warmth occasionally fall into this category. In one of the study sites, a major fire occurred when a candle was left burning unattended for a long period of time in a hotel room. The prosecutor attempted to file this case on the theory that the fire resulted from a "reckless act." Many cases such as this never reach prosecution, but are screened out by investigators or prosecutors. Intent was a factor in the following case which was accepted for prosecution:

> The prosecutor charged that a businessman solicited two torches to burn a competitor's property. The owner was overheard in a conversation which the prosecution claimed amounted to solicitation of arson. However, at trial, the defense attorney claimed that the defendant had been joking and therefore lacked the necessary intent to procure or cause the fire. He asked the jury to consider whether they had ever made similar statements in jest that were never intended to be taken seriously or acted upon. The defendant was acquitted.

Prosecutors generally felt that arson posed no unique problems in terms of proving the defendant's criminal intent, since this is an element in the prosecution of most crimes. In a few instances, the defendant's

CONTINUED

3 OF 4

drunken state or mental incapacity led to a reduction in charges but, on the whole, intent did not appear to be a major factor influencing the outcome of the cases in our study.

6.4.3 Establishing Motive

Motive is not a legal element of the crime of arson. Thus, the introduction of evidence on motive is completely discretionary. The importance of motive evidence lies in its persuasiveness rather than in any legal necessity that it be proven. Almost without exception, investigators and prosecutors try to obtain evidence on motive to make their case more convincing and understandable to a jury. Overall, 75 percent of the prosecuted cases studied included some evidence on motive and the discussion in Section 6.3 suggests that this evidence type has a statistically significant impact on outcomes of arson cases going to trial.

Certain types of motive evidence are easy to obtain and are particularly persuasive. In many cases, the investigators readily identify witnesses to the defendant and victim arguing minutes or hours before the fire. The victim may also testify to the defendant's threats, if any were made. Evidence of argument or threats is especially helpful to the prosecution's case if it includes specific evidence of a threat to burn. Even a general threat of harm or revenge strengthens the case. (However, as will be discussed in Section 6.4.5, there is often a problem in spite cases with victims becoming reluctant to testify.)

Motive evidence in arson-for-profit cases can be extremely complex and subject to conflicting interpretations. This problem is particularly severe when the evidence is based on inferences drawn from business, financial, or property records. Such evidence is often difficult for juries to follow and understand. Knowledgeable prosecutors point out that if the jury is confused by the evidence the state's case is in serious trouble. Far preferable to inferences from financial records are direct statements establishing motive. A perfect example is a witness who can testify to the defendant saying "business is bad."

Prosecutors have a much more difficult time with cases in which there is no apparent or understandable motive. The following case was dismissed by the prosecutor for three reasons: the case lacked evidence of motive, the fire caused only minor damage, and the defendant had no prior record.

> This fire occurred in a freight elevator in a hotel. The damage was confined to the elevator's electrical control panel and was estimated at $700. A witness saw the defendant, an employee of the hotel, get on the elevator at the ground level. When the elevator stopped on the 22nd floor, the defendant was the only person present. A witness saw the burned control panel and many matches scattered on the floor of the elevator. Expert analysis of the wiring behind the control panel revealed no damage, ruling out the possibility that the fire was caused by an electrical malfunction. However, there was no evidence that the defendant had any reason for setting the fire.

Jurors have told prosecutors after acquittals that they simply could not understand why the defendant would have set the fire, so they voted "not guilty" despite the judge's instruction that no motive had to be proven. In some cases, the issue is not just the absence of convincing evidence on motive but the presence of evidence that suggests the defendant would be harmed by the fire, thus creating a type of "negative motive." Acquittals resulted in several cases in which tenants accused of arson lost their possessions as a result of the fire. In one case, a tenant ran back into the burning building to retrieve some of his possessions and remained there crying, refusing to leave. The tenant was charged with arson and the jury acquitted him, because the motive offered by the prosecutor--a desire to avoid payment of rent--did not seem strong enough to overcome the material and psychological loss the defendant suffered from the fire. Another factor at work in the jury's mind in this case was a suspicion that the owner may have set the fire to obtain insurance proceeds.

Another example of "negative motive" comes from a case that never reached the jury, but was dismissed for insufficient evidence. The prosecutor knew he faced a difficult task in convincing the jurors of the defendant's guilt because of the absence of compelling motive evidence.

> The fire occurred in an apartment building owned by a man whose business was rebuilding fire-damaged structures. He readily admitted to chasing fire engines as a strategy for obtaining new customers. His own apartment buildings were in good condition and housed a fairly stable tenant population.
>
> The fire started in the apartment of an employee of the owner. The employee had already left for work when his wife heard the smoke alarm and discovered a fire in the bedroom where her children were sleeping. She was ques-

tioned several times, but stuck to her story that she did not know how the fire had started. Apparently because she was the only person considered to have had any opportunity to set the fire, she was charged with arson. From the information available in case files, it is difficult to ascertain what motivated the arson. There seemed to be no indication that the owner had conspired with his employee's wife to set the fire for insurance fraud, nor was there any evidence of ill will between the owner and his employee or the defendant. In fact, the risk to her children and the damage to her possessions suggest that the defendant had more to lose than to gain from the fire. In general, the prosecutor's entire theory of the case seemed highly implausible and was, in any event, unsupported by any strong evidence of motive. The case was dismissed by the judge for insufficient evidence.

In summary, the presence or absence of motive evidence may influence case outcomes in several ways. It may lead a prosecutor to dismiss a case or agree to a plea to a lesser charge. It may convince a jury in an otherwise weak circumstantial case or it may lead to an acquittal even though the prosecutor has presented all the elements required by law to prove the crime of arson.

6.4.4 Establishing Opportunity

Prosecutors and investigators interviewed in the course of this study agreed that the greatest difficulty in arson cases arises in linking the defendant to the crime. We examined this issue from the investigative perspective in Chapter 4; we now discuss its implication for prosecution.

An arson defendant may be placed at the scene of the fire through direct evidence (involving an eyewitness to the actual firesetting act) or circumstantial evidence (showing that the defendant had the opportunity to set the fire.)[1] The latter possibility ranges across a broad continuum regarding the degree of exclusivity of opportunity. At one extreme is testimony, for example, placing the defendant in the general area of the fire one-half hour before the fire started. Close to the other end of the

[1] A slightly different situation exists in the prosecution of someone who procured or planned the firesetting act but did not participate in lighting the fire, since placing the defendant at the fire scene is irrelevant. The types of evidence used in these circumstances will be discussed later in this section.

continuum is evidence that the defendant had the only key to the burned premises which were locked when firefighters arrived and showed no signs of forced entry. The extreme, and almost literal, case of exclusive opportunity is the fire set by an inmate in a locked jail cell. However, most arson cases involve much more tenuous linkages between the defendant and the scene. Typically, evidence of opportunity rests on testimony that can be undermined by identification problems, alibis, and complex issues of timing.

It is sometimes difficult to explain outcomes based on the documented evidence linking the defendant to the crime. For example, the following two cases appeared to be very weak in evidence of opportunity, but in both of them the defendants pled guilty.

- In a case involving a fire in a storage shed, the defendant claimed to have discovered the fire and notified the fire department. When questioned by the fire investigators, the defendant's answers were occasionally inconsistent. However, while admitting other arsons, he initially denied setting this fire. Despite the absence of any evidence on motive in case files, and despite the defendant's tenuous linkage to the fire only through his admission that he discovered it, the defendant ultimately pled guilty.
- This case involved a series of 14 vehicle fires with no eyewitnesses. Several people had seen the defendant in the general vicinity of some of the fires but could not directly link him to the fire scene. Nonetheless, the defendant pled guilty.

In contrast to these two very weak cases which resulted in guilty pleas, it is possible to have evidence suggesting virtually exclusive opportunity and still not obtain a conviction. In the following case, the defense attorney raised doubts not only about the evidence of opportunity to set the fire, but also about the incendiary origin of the fire and the defendant's motive. In addition, there was a problem with one of the prosecution's witnesses. Therefore, it is not possible to assess this case's outcome solely in relation to opportunity evidence. However, it is a useful example of how an aggressive defense attorney can counter evidence which seems to link the defendant exclusively to the fire scene:

> The defendant was two months behind in her rent, but promised to pay what she owed on a specific date--the date, as it turned out, that the fire occurred. The defendant's roommate (whose reliability and motive for testifying were challenged by the defense attorney, since she and the

defendant had argued recently and since she was involved in prostitution) recounted the defendant's behavior before and after the fire. According to the roommate, she and the defendant had left the apartment together, but the defendant suddenly decided she had to go back to "make sure she hadn't forgotten anything." The defendant stayed in the apartment for what seemed to the roommate like a long time, then emerged and the two drove away. A while later, the two roommates returned to the apartment and found that a fire had occurred. The prosecutor attempted to show that the defendant was the only person who could have set the fire, through testimony from the building manager that he saw the defendant leave the apartment about 10 minutes before the fire and saw no one else enter until the fire department arrived. The manager claimed to have had the door in view continuously during that interval. Suppression forces reported that the apartment was found locked and secured with no evidence of forced entry.

In addition to attacking the credibility of the roommate, the defense attorney raised doubts about the fire's incendiary origin and the defendant's motive--why would she leave all of her clothing and possessions on the premises knowing they would be damaged or destroyed by the fire? On the issue of opportunity, the defense attorney played on doubts about the manager's testimony. On cross-examination, he was able to raise the possibility that both roommates had returned to the apartment and that the other roommate was the firesetter. The manager was not able to state conclusively that the defendant had entered the apartment alone. Therefore, exclusive opportunity could not be conclusively established and the jury acquitted the defendant.

To be most effective, evidence of opportunity must place the defendant at the scene very close to the time of the fire. Questions about the timing of the defendant's presence at the scene have led to acquittals, as in these two examples:

- An employee was accused of causing a multi-million dollar fire which originated in the basement of a department store. There was no problem placing the defendant at the scene. A witness testified to seeing him in the basement just before a considerable volume of smoke and flame appeared. The problem was that this witness was also positive that the defendant had not been in the basement two minutes before that, when she went down to visit the ladies' room. This testimony cast serious doubts on the prosecution's case, because the defendant could not have set the fire and caused it to spread so rapidly during the short time he was placed in the basement by the witness testimony. This problem, along with an alternative explanation of the fire's origin by a defense expert, led to an acquittal.

- A woman was charged with setting fire to an apartment building immediately after a fight with her husband. There were witnesses to the couple's argument. However, these witnesses could not be precise about times. The defendant claimed that she and her sister-in-law were taking her children to the hospital when the fire occurred. Hospital records roughly confirmed their story, although both the defendant and her sister-in-law were also confused about the timing of certain events. The jury acquitted the defendant.

Linkage of the defendant to the scene may be established through physical evidence as well as testimonial evidence. Although one of the difficulties often mentioned concerning arson investigation and prosecution is the absence of physical evidence to tie the defendant to the scene, such evidence does exist on occasion. One of the cases studied involved an arson committed to conceal a burglary. The defendant was convicted, based in large part on testimony showing that he had in his possession after the fire items stolen from the apartment. In another case that had not reached trial at the time of our study, investigators were attempting to show that, at the time of the fire, the defendant was in sole possession of all keys to the burned premises and that there was no evidence of forced entry when the firefighters arrived. In a third instance, the defendant was linked to the fire scene by his burned clothing and burns on his body.

An innovative approach to developing evidence of opportunity combines technical evidence on fire behavior and evidence placing the defendant at or near the scene. If expert testimony on the fire's burn time--that is, the interval between its ignition and its discovery--coincides with evidence as to the time of the defendant's presence, the argument for the defendant's opportunity to commit the arson is significantly strengthened.

However, even direct evidence such as an eyewitness does not guarantee an arson conviction. Thirteen percent of the sample prosecutions with direct evidence did not result in conviction. If the prosecution offers an eyewitness to the defendant setting the fire and the defense counters with an alibi witness, the case rests on the comparative credibility of the two witnesses. As noted, juries are extremely unpredictable. Moreover, one prosecutor noted that an alibi witness may not really be independent and does not pose a great threat if the prosecution trusts its own witness. However, if the prosecution witness is of questionable character, a jury may not believe the evidence being offered, as in the case below.

> The defendant and his family had been involved in a fight with the victim and her family, and there was evidence indicating that threats had been made by the defendant prior to the fire. The prosecution produced a witness who claimed to have seen the defendant light a match and throw it against the victim's door where fire investigators testified gasoline had been poured. However, the credibility of this eyewitness was undermined when his record of conviction on a morals charge involving a young child was disclosed. In addition, the defendant denied involvement and produced an alibi witness. The jury acquitted the defendant.

Although most arson cases involve charges against the individuals who started the fires, and therefore are based on either direct or circumstantial evidence placing them at the crime scene, prosecutions aimed at owners who hire torches to set fires must rely on other types of evidence. Since the property owner is not being accused of lighting the match but of causing the torch to set the fire, the state must tie the owner to the conspiracy.[1]

The typical prosecution of an arson-for-profit conspiracy case involves testimony by a co-conspirator or accomplice. Sixteen out of 17 of the sampled cases in which the defendant was not accused of setting the fire involved such testimony. Accomplice testimony often referred to the transaction or payment in an arson-for-profit conspiracy. Given the credibility questions surrounding accomplice testimony (since it may be considered self-serving), such testimony is not normally sufficient to support a conviction. There must be independent evidence to corroborate accomplice testimony.[2] As discussed in Chapter 4, the need for this evidence influences investigative practices. In the Bronx, in particular, considerable effort goes into wiring accomplices to obtain taped admissions by suspects.

Prosecutors differed on the nature of the corroboration needed in the absence of audio-visual evidence. What is required by way of corroboration differs widely across jurisdictions. In one of the prosecutor's offices studied, an internal memorandum on troublesome legal issues in arson cases points out

---

[1] In many jurisdictions prosecution may be brought under the arson statute as well as a general conspiracy statute, since the arson law includes acts such as abetting, procuring, or conspiring to cause the fire. The evidence needed to convict someone of these acts differs from that required when the alleged criminal act is setting the fire.

[2] This issue can arise in other types of cases besides arson-for-profit. However, it seems to pose particularly difficult problems in arson-for-profit where the owner is involved.

that "[e]vidence which corroborates the testimony of an accomplice may fall short of connecting the defendant to the crime." In essence, prosecutors point out that evidence consistent with the version of the fire's origin described by the accomplice/informant may add credibility to the testimony of the accomplice, but does not corroborate the testimony linking the defendant to the crime. The nature of the corroboration required must generally be sufficient on its own to connect the defendant to the crime.

Many cases lacking adequate corroboration never reach prosecution, either as a result of being dropped for insufficient evidence during the investigation or being rejected when presented for prosecution. On occasion, however, other types of corroboration may be available. The following is an example of a case with sufficient corroboration of an accomplice's testimony:

> A married couple who owned a bar were facing financial troubles and decided that arson might prove to be a way out of their difficulties. The couple approached several customers and offered them money to burn the property. At first, no one expressed interest in doing the job. However, several nights later, two other patrons were asked to torch the building and this time, the offer was accepted. The two torches entered the building and began to spread gasoline throughout the premises. Before they had finished, however, the fumes came into contact with a pilot light they had neglected to turn off. One of the torches was killed in the ensuing explosion. His partner survived and ultimately confessed to investigators, implicating the owners in the process. For a while, the investigation was stymied for lack of corroborative evidence. The investigators subsequently interviewed the patrons who were in the bar the <u>first time</u> the owners offered to pay someone to commit arson. As these witnesses were not involved in the crime itself, and therefore were not accomplices, their testimony on the owners' actions and statements could serve as corroboration for the testimony of the surviving torch. Both the torch and the two owners were convicted on the highest count of arson alleged in the case.

In summary, evidence linking the defendant to the crime is a key element in arson prosecution, even though the nature and quality of the linkage necessarily varies with the circumstances of the case.

6.4.5 <u>Witness Problems</u>

As suggested by the regression analyses described earlier, witness problems can have a strong negative impact on a case. Almost half of the

cases with a witness problem result in no conviction. A problem with a witness may mean certain evidence is lost to the prosecution entirely. In a spite case, where there is typically a prior relationship between victim and defendant, the victim may decide, after the initial anger has subsided, not to pursue the case. In other instances, an important witness may disappear and thereby be unavailable to testify.

A witness problem may also undermine the quality of the evidence available to the prosecutor. If there are aspects of the witnesses' character or background that undermine their credibility, the value of their testimony is diminished. This was a problem in the case described earlier in which one of two roommates was charged with arson and the other (who was involved in prostitution) testified for the prosecution. A witness' prior criminal record may reduce his or her effectiveness as a witness. In many of the spite and revenge cases in the Bronx, this is cited as a problem. The character of the witness may become more of an issue when, by comparison, the defendant is an upstanding citizen. The prosecutor who handled the case against a businessman charged with procuring an arson fire is convinced that one of the contributing factors in the acquittal was the unsavory character of the witnesses for the prosecution compared to the spotless reputation of the defendant.

Even when a witness is available and of good character, the value of his or her testimony may be undermined if there is reason to suspect that it was actuated or colored by animus against the defendant. This situation arose in the following case:

> The defendant, who had been evicted, came back to her apartment several times, but one day found the door nailed shut. She borrowed a hammer and got the door open. Shortly after she left with some possessions, a neighbor noticed smoke and found a fire in her apartment. This witness was under indictment for assaulting the defendant's boyfriend several months earlier, and therefore was not regarded as credible. Since there was little other evidence, the jury acquitted the defendant.

A final way in which a witness' testimony may be flawed stems from internal inconsistencies or other indications that the witness is unsure of the facts being presented. In one case, the prosecutor initially believed he had a very strong case. However, this perception changed over time:

> The victim had rented a mobile home to the defendant, who soon fell behind in his rent. When the victim sought to collect what was owed to him, the defendant refused to pay and threatened the victim. Subsequently, the victim's vehicle was set on fire. As the evidence originally developed, one witness claimed that he saw the defendant and another man break a window in the victim's truck and then set fire to the interior of the vehicle. A second witness claimed only to have seen the defendant approach the truck, at which point she went to call a neighbor. The truck was already on fire when she returned. As the case developed, however, it became clear that the witness claiming to have seen the defendant actually set the fire had not seen anything like that at all. He had only seen the defendant in the vicinity of the victim's vehicle. The second witness had correctly reported her observations, but other factors diluted the value of the testimony she could offer. She was the sister of the defendant and a friend of the victim and had had several arguments with the defendant (her brother) over her relationship with the victim. The case was ultimately dismissed because of the victim's lack of cooperation.

Thus, evidentiary quality is just as important as evidentiary substance in proving arson cases. As already noted, evidentiary quality is difficult to assess and virtually impossible to quantify. Witness problems are only one aspect of that broad area. Still, based on the limited data available for this study, we can conclude that, with reliable and competent witnesses, prosecutors seem willing to take circumstantial cases and are able to obtain convictions in many of them.

6.5 Prosecution Structure and Arson Specialization

One objective of this study was to examine the relative effectiveness of arson prosecution in jurisdictions with horizontal and vertical prosecution structures and various degrees of specialization in the assignment of arson cases. If we were to base our conclusions solely on the hard data from the sampled cases, the extremely high and remarkably consistent conviction rates found in the study sites would almost preclude us from recommending any one approach over another. If forced to compare approaches based on the data, we might conclude that Cleveland's totally horizontal and non-specialized approach was preferable. The Cuyahoga County Prosecuting Attorney's Office appears to accept arson cases with relatively weaker evidence than do prosecutors in the other sites, yet the office achieved the highest arson conviction rate among the four cities.

However, if we look beneath the hard data to the comments and concerns of the prosecutors and investigators interviewed in the course of this study, a different conclusion emerges. We believe that a certain degree of specialization in arson prosecution is desirable, if it can be accommodated within the overall structure of the office. There are a number of reasons for this:

- The value of specialized prosecutorial screening of arson cases: As discussed in Chapter 5, it seems highly valuable for investigators to have regular access to a prosecutor knowledgeable about arson cases during case development and prosecutorial screening. This not only helps investigators build cases but also facilitates prosecutorial monitoring of ongoing investigations to ensure that leads or suspects do not "fall through the cracks." Such relationships can be developed under centralized/non-specialized screening approaches (as in Denver), and even under decentralized/non-specialized approaches, but they are most likely to develop under a fully centralized and specialized system of arson case screening.

- The need for maximizing efficiency in case processing: Under totally non-specialized prosecution structures in large offices, it is almost inevitable that each attorney will handle very few complex arson cases and that the assignments will be widely spaced in time. It is inherently inefficient for each prosecutor to learn--or re-learn--the technical issues involved in these complex prosecutions, but this is what is required under such structures. On the other hand, it is just as wasteful to occupy a highly skilled and experienced arson specialist with the routine cases that constitute the bulk of the arson caseload. Although, as discussed in Section 6.4, linkage of the defendant to the crime often poses problems in arson cases, these are generally not problems that are unique in substance to arson cases. We suggest that specialization be limited to cases posing complex technical issues of fire cause and origin or intricate questions of motive, such as encountered in many arson-for-profit cases.

- The relatively low conviction rates in arson cases that go to trial: As discussed in this chapter, there are problems encountered in presenting effectively at trial the complex and technical issues involved in some arson cases. Specialization might help to improve these skills.

- The increasing skill and experience of the defense bar in arson cases, which was mentioned by prosecutors in several study sites. This suggests a corresponding need for increasing skill and experience among prosecutors of arson cases. Specialization is the best method of developing and maintaining the required level of skills, knowledge, and experience.

- Specialized prosecutors' opportunity to become familiar with the arguments used by cause and origin experts typically called by the defense and their consequent ability to counter these arguments more effectively in court.

- Specialized prosecutors will be in a better position to develop and maintain the close working relationships with insurance companies that are crucial to establishing a flow of valuable investigative information from insurers to public authorities.

As the foregoing points imply, the choices are not limited to totally vertical or totally horizontal structures or to totally centralized or totally decentralized approaches. Rather, there are several "hybrid" systems that are worth serious consideration, such as the following:

- hybrid screening/hybrid prosecution: This is the system currently being instituted in San Diego. The special arson prosecutor has issued criteria qualifying cases for specialized screening. These are designed to capture cases with technical issues of incendiary origin, arson-for-profit cases, and cases involving serious fires. Cases not meeting these criteria receive non-specialized screening by the office's Issuing Section. The special arson prosecutor handles vertically all cases he considers worthy of specialized prosecution. The cases he considers worthy of prosecution but unworthy of specialized prosecution are simply added to the general felony processing stream. This system is well-conceived, but its major disadvantage appears to be its reliance on investigators to determine which cases qualify for specialized screening. Under this system, it is possible that some cases worthy of specialized treatment will "fall through the cracks."

- specialized screening/hybrid prosecution: This system, which used to be in operation in San Diego, appears to offer the "best of both worlds": specialization and efficiency. It takes into account both the general value of specialization at the screening stage and the very real case-to-case variation in the value of specialized prosecution. Under this approach, a special arson prosecutor screens all arson cases, passes the acceptable but routine ones on to the general felony processing stream and vertically prosecutes those posing technical or complex issues. If there is not enough arson work to keep a special prosecutor fully occupied, it may be necessary to supplement his or her caseload with other types of cases or to merge arson specialization with a fraud or economic crime unit whose cases already have many issues in common with arson-for-profit prosecutions (as in the Bronx). These modifications at least ensure that prosecution of complex and technically challenging cases is concentrated in the hands of one or a few attorneys.

6.6 Summary

As already documented in previous chapters, the major problem in the process of arson investigation and prosecution appears to be getting cases to prosecution. This chapter shows that, once accepted for prosecution, arson cases are generally handled with skill and effectiveness. Overall, arson conviction rates are extremely high in all four jurisdictions under study (73 percent to 83 percent). This fact reflects both the generally high level of skill and effectiveness among prosecutors and investigators. It also reflects the fact that, contrary to the impression conveyed in the literature, the majority of arson cases reaching prosecution are relatively simple and straightforward, in terms of evidence and other technical and legal issues. In reality, relatively few arson prosecutions pose the kinds of problems commonly cited to support the view that arson cases are particularly difficult to prosecute: the technical problems associated with establishing incendiary origin, the intricate and painstaking investigation necessary to establish a fraud motive, the normal absence of a direct human victim, the frequent lack of witnesses, and the rarity of physical evidence linking the defendant to the fire.

These kinds of problems are often associated with complex arson-for-profit cases. But fraud arson cases constituted only nine percent of the sample of prosecutions under study. Exactly one-half of the sampled prosecuted cases were motivated by spite or revenge. Moreover, over 60 percent of the prosecuted cases (and 64 percent of the convictions) included direct evidence of the defendant's commission of arson (in the form of a confession or eyewitness testimony). The remaining 40 percent of accepted cases (and 36 percent of convictions) were based on various combinations of circumstantial evidence. The preponderance in the sample of cases with direct evidence is surprising in light of the common observation that arson cases are typically circumstantial in nature. On the other hand, the fact that a substantial minority of convictions were based only on circumstantial evidence demonstrates clearly that prosecutors can win such cases with regularity.

While overall conviction rates in arson cases were found to be extremely high, the conviction rates in cases going to trial were somewhat lower (58 percent)--indeed, in three of the four sites the trial conviction rate was only about 50 percent. Thus, it is in cases going to trial that the

most serious problems with arson prosecution appear to lie. At trial, the key issues--establishing incendiary origin, motive, and opportunity--often become problematic. Sample data from this study suggest that arson cases differ from other types of criminal cases in that it is the weaker cases that tend to go to trial and the stronger cases that end in guilty pleas. If this is true and if, as several prosecutors predicted, the defense bar becomes increasingly aggressive and skillful in arson cases, it may become even more difficult to win convictions at trial. As a consequence, more defendants may demand trial.

Several measures might be adopted in an effort to increase the conviction rate in arson cases going to trial. Prosecutors might pay increased attention to developing convincing and plausible evidence of motive and effective and understandable presentations of the evidence establishing the incendiary origin of the fire. Moreover, as in many other types of criminal cases, careful attention must also be paid to the intricate issues of timing and identification involved in evidence of the defendant's opportunity to commit arson. Ultimately, the most promising way to enhance the level of prosecutors' skills and technical knowledge in handling arson cases may be for prosecutors' offices to adopt a form of arson specialization, such as the "hybrid" approach proposed in Section 6.5 of this chapter.

7.0 SUMMARY OF RECOMMENDATIONS

There are two basic methods of reducing the incidence of arson in the United States: prevention and deterrence. At first glance, they may appear to be the same thing, but in fact they differ substantially in emphasis and involve largely different actors. Arson prevention, which has not been a topic of this report, involves direct measures designed to stop arson before it occurs. Deterrence is indirect; it relies on the example and the cumulative effect of successful investigation and prosecution of arsons that have already occurred. These topics have formed the basis of this study.

Arson prevention includes such diverse strategies as the following:[1]

- arson early warning systems--identification, through computerized record searches, of arson-prone properties, followed by direct intervention designed to prevent those specific properties from burning;
- block watches and arson patrols;
- arson public awareness campaigns;
- tightening of insurance regulations and practices to make it more difficult to overinsure properties and to obtain insurance on deteriorated and otherwise arson-prone properties;
- counselling programs for juvenile firesetters; and
- the whole realm of neighborhood revitalization programs designed to reverse the urban deterioration that is both the perfect breeding ground for arson and is further exacerbated by arson.

The private sector plays a key role in most arson prevention activity--particularly community groups, the insurance industry, educators, and the media. Of course, public officials are involved in many of these activities as well.

It is notoriously difficult to measure deterrence, yet there is little doubt that the deterrent effects of criminal sanctions operate effectively on much of the population much of the time. The rare occasions when a power failure, civil disturbance or police strike loosen social controls and result in widespread looting or burning serve to point up the effectiveness of such controls in normal times. Arson is somewhat unusual among felonies in that it can attract citizens who otherwise have never been involved in criminal activity. Such persons often have reputations at stake in their communities and might be thought to be particularly sensitive to the risk of exposure for criminal wrongdoing. It is on these persons that the deterrent effect of arson prosecutions can perhaps work best.

Particularly among the white collar population responsible for much of the arson-for-profit, the most effective deterrent is an increase in the perceived likelihood of detection and exposure. (An additional deterrent may be a reduction in the profitability of arson. This may be more readily controlled by insurance companies than by criminal justice agencies, although recent statutory changes--such as California's establishment of heavy fines in addition to imprisonment as penalties for profit-motivated arson--illustrate the public sector's role in removing the profit from arson.) Even though most people do not keep track of criminal justice statistics, it does not take much sophistication to recognize that most arsonists escape apprehension, in spite of impressive conviction rates by prosecutors and respectable clearance rates by police. Our data indicate that prosecutors are extremely successful in obtaining convictions in the arson cases that they accept for filing. It is less clear whether firefighters and investigators are detecting as many arsons as possible, identifying as many suspects as possible, and presenting as many cases as possible to the prosecutor. Moreover, it appears that prosecutors may be overly conservative in their screening policies and perhaps should accept more circumstantial and "marginal" cases. Given the sensitivity of the potential white-collar arsonist to the risk of discovery, even a modest increase in the rate of prosecution and conviction per actual arson incident might have a large deterrent value. Members of the Police Arson Unit in Cleveland are convinced that their intensive focus on arson-for-profit cases over the past two years has significantly reduced the number of financially-motivated arsons in that city.

Data on arson losses in major cities have as yet shown no convincing downward trend. If and when they do, it will probably not be the result solely of actions by prosecutors' offices, but rather the result of numerous, effective, and highly publicized arson investigations backed up by vigorous prosecution. In this chapter, we offer a range of recommendations in the areas of arson investigation, prosecutorial screening, and arson prosecution

---

[1] For descriptions of the whole range of arson prevention strategies, see Richard Ku, Theodore M. Hammett, Deborah Day Emerson et al., Arson Control: A Synthesis of Issues and Strategies Based on the Arson Control Assistance Program (Report submitted to the U.S. Department of Justice, Law Enforcement Assistance Administration, 1980), especially Chapters 4-5. This report is available through the National Criminal Justice Reference Service, Rockville, Maryland.

which derive from the findings of this study. We also present some suggestions for further research.

7.1 Arson Investigation

This study has shown that in the overall flow of arson cases from determination of incendiary origin to final disposition most cases drop out at the investigation stage--particularly between the determination of arson and presentation of the case to the prosecutor.

7.1.1 Investigative Process

In point of fact, arson detection may be the first major drop-out point. Although the subject is not covered extensively in our report, the problems of arson detection are emphasized in the literature and are frequently mentioned by arson investigators. Thus, we believe that it is essential to devote continued attention to the training of fire suppression personnel in arson detection and in cooperation with fire investigators performing scene examinations.

Our data show a surprisingly low level of reliance on laboratory analysis of fire debris in the establishment of incendiary origin. Instead, this element of the case more often seemed based on expert observation of fire characteristics and burn patterns by the arson investigators and a clear presentation of those observations in the investigative report and on the witness stand. While some observers downplay the importance of physical evidence in establishing incendiary origin, we share the view of many investigators and prosecutors that samples of fire debris should be collected and analyzed in as many cases as possible. This can assist the prosecution in several ways, depending on the theory of incendiary origin being presented in the particular case: laboratory analysis can be used to support contentions that accelerants were or were not used and to rebut defense arguments that legitimately present flammable materials caused the fire to spread. Moreover, collection and analysis of physical evidence, regardless of the result, is important in establishing that a complete crime scene examination was performed.

At the same time, undue emphasis should not be placed on the acquisition of sophisticated and costly laboratory equipment as a panacea for the problem of establishing incendiary origin. Careful and thorough scene examination reports, effective expert testimony, convincing laboratory analysys, and generally logical and intelligible court presentations (utilizing

diagrams, photographs, or even videotape) are all essential to proving this crucial first element of an arson case. In general, investigators should assume in building each case that it will ultimately go to trial. Thus, they should evaluate all evidentiary elements for their persuasiveness in a court presentation.

This report has repeatedly stressed the concept that arson is best understood not as a monolithic crime but as a set of virtually discrete crimes requiring different investigative and prosecutorial strategies. As a result, the part of the investigation which attempts to determine the motive of the arsonist is very important. There is a strong tendency to ascribe to vandalism or malicious mischief those vacant building fires or grass fires with no immediately identifiable suspect or otherwise apparent motive. In many cases, this may be a correct determination. However, it is important that all possible motives be considered. Obviously, resource constraints and the relative importance of the evidentiary elements play a role in this process. Not all arsons can be investigated with the same intensity. In addition, while motive evidence is important, it will rarely produce a prosecutable case by itself or even in combination with strong evidence of incendiary origin. There must almost always be evidence linking the suspect to the arson. However, keeping these considerations in mind, certain key inquiries should be made. In cases of structural fires, there should be a check on the status of insurance and any possible motive that the owner might have for burning the property. Another possible aid to motive determination is the development of a profile of arsons by motive category, according to fire characteristics such as point of origin, material ignited, and use of accelerants or ignition devices. Investigators in all jurisdictions probably have in mind a set of fire characteristics indicating particular motive types, but it might be helpful to systematize such "profiles" and to provide then with some empirical underpinning.

As noted above, resource constraints preclude giving the same full investigative attention to all arson cases. Thus, case management is extremely important. There are two major stages of arson investigation caseload management: the first is deciding which cases deserve follow-up investigation and the second is deciding whether a case is worthy of presentation to the prosecutor. The first stage involves focusing the resources available on the cases most likely to be solved. These decisions are often difficult, but two categories of cases seem to deserve particular attention. First, and most

obviously, cases with identified suspects or other tangible leads should receive timely follow-up attention. Second, systematic analysis of solvability factors might be used to identify another, perhaps less obvious, set of cases worthy of follow-up investigation. A relatively simple survey of past cases could probably yield a profile of the cases most likely to be solved.

Regardless of how cases are selected for follow-up attention, it is crucial that there be regular review of active cases to ensure that information and leads do not "fall through the cracks." A surprisingly large number of cases in our sample appeared to suffer from failure to follow up on documented leads. A "tickler file" or some form of periodic monitoring of investigators' caseloads by supervisors and by special arson prosecutors might help to prevent such lapses, which often result from the demands of burdensome caseloads.

The second stage of caseload management is the determination, at some point in the investigation, of whether cases designated for follow-up attention will be presented to the prosecutor. Our findings suggest that investigators may be too conservative in the "pre-screening" process and that there are more cases worthy of presentation.

In some jurisdictions (such as Cleveland), pre-screening and presentation rarely occur before a case is fully developed, while in others (such as Denver), investigators frequently consult informally with prosecutors about cases at an early stage of their development. Particularly if more cases are to be presented, it appears that informal consultation with the prosecutor early in case development would be extremely useful as a way to strengthen promising cases and prevent waste of investigative resources on cases with a low probability of ultimate acceptance. Conversely, this type of contact should also help to prevent promising cases from being prematurely screened out by investigators. In general, as evidenced by the Denver experience, informal contact also helps to regularize and enhance investigator-prosecutor relations and provides a vehicle for ongoing training on case sufficiency.

When cases are formally presented to the prosecutor's office, it is particularly helpful to the screening attorney to have a complete and intelligible investigation report. Thus, we strongly endorse training of investigators in report preparation and the adoption of a standard investigation report format which requires the step-by-step enumeration of the facts of the case. (Appendix C presents a standard report format developed by San Diego's Metro Arson Strike Team.) In general, investigators should receive more

training and guidance on the prosecutor's information needs. An important fact that is sometimes overlooked is that the evidence necessary for an investigator to clear a case by arrest is quite different from the evidence required to make a prosecutable case.

In most instances, prosecutor involvement in arson investigations prior to formal presentation appears best limited to an advisory or consultative role. Much of the literature on arson control advises prosecutors to attend the fire scene and some writers even argue that the prosecutor should direct the investigation. However, our data do not confirm the value of regular prosecutorial involvement in investigations. It may be advisable for a prosecutor to attend the scene of a serious fire, particularly if it appears likely that the case will go to trial. Direct observation of a fire scene may, in such cases, enable the prosecutor to make a more effective court presentation. However, such cases are extremely rare. By and large, the investigators know how to conduct a proper scene examination and do not need the assistance of a prosecutor. However, when there is a need for legal--as opposed to technical investigative--advice, the role of the prosecutor may be critical. The prosecutor should be available to provide information and advice on warrants, arrests, searches, and the evidentiary strength of cases. Such advice can be extremely useful in the development of particular cases as well as in enhancing the investigators' general knowledge of the legal issues involved in their work. It may also be useful for prosecutors to be involved early in expanding arson-for-profit investigations where a "torch" is being used to try to implicate property owners involved in the scheme. Finally, specialized arson prosecutors can monitor ongoing investigations to help ensure that suspects or leads do not "fall through the cracks".

7.1.2 Investigative Staffing Levels and Deployment

An obvious response to the heavy drop-out rate of arson cases at the investigative stage might be to advocate increases in investigative staff. However, given budgetary constraints in most jurisdictions, this is extremely unlikely to occur. Moreover, our data show that many of the unsolved arsons occur in vacant buildings or other situations in which no witnesses or information are available to investigators. Such cases may be essentially unsolvable, no matter how many investigators are available. Thus, we would recommend, in most instances, that careful cost-benefit analysis of expected

changes in clearance rates be undertaken before investigative staff is increased. (In a previous study, Abt Associates proposed an approach to such cost-benefit analysis.)[1]

Another possible strategy for increasing investigative effectiveness without necessarily incurring additional cost is redeployment of existing staff to target areas of high arson incidence. Such strategies are of particular relevance to large cities. A pilot program in New York City (the "Red Cap" Program) concentrated conspicuously dressed fire marshals in marked cars in limited areas of high arson incidence. This strategy was found both to reduce arson incidence and to increase the arson arrest rate.[2]

7.1.3 Investigative Structure

The sites included in the present study represent four different investigative structures: "divided responsibility"; "police-fire teams"; "exclusive fire department responsibility;" and "exclusive police department responsibility." Viewed in terms of overall success rates in arson investigations, our data do not suggest that any one of the four approaches is superior. However, qualitative and anecdotal evidence suggest that team approaches and one-department structures have real advantages.

If the police-fire teams are real teams as they are in San Diego (where the team members work together throughout an investigation and have common or at least overlapping shift schedules) rather than a disguised version of the divided responsibility approach, or if all the investigators belong to the same department (fire or police), there is less opportunity for lapses of communication and failures to follow up on investigative leads. Under the divided responsibility approach, it is more likely that information will "fall through the cracks" because of fire investigators' and police detectives' differing shift schedules, reporting or paperwork problems, or inter-departmental conflict. Of course, under any investigative structure, it is crucial that all divisions of labor and responsibility be defined as

[1] Abt Associates Inc., "Evaluation Options in Arson Control," (Report submitted to U.S. Department of Justice, National Institute of Justice, January 1982), Section 2.2. This report is available from Abt Associates Inc.

[2] Fire Department, City of New York, "Red Cap Program: Executive Report," (1983).

clearly as possible. This also helps to prevent conflict and ensure that all leads are pursued.

7.2 Prosecutorial Screening

This study has shown that, in general, most arson cases presented for prosecution have strong evidence and that the vast majority are accepted by prosecutors. At the same time, the data reveal some interesting variations across jurisdictions and arson motive categories in the characteristics of cases accepted for prosecution. The vast majority of San Diego's accepted cases had direct evidence of the defendant's commission of the arson (in the form of a confession or eyewitness testimony), while the majority of Cleveland's accepted cases were entirely circumstantial. Across all sites, fraud cases accepted for prosecution were much more likely to be entirely circumstantial; this despite apparently more stringent screening standards than those applied to other types of arson case. On the other hand, spite and pyromania cases were much more likely to rely on direct evidence. Nevertheless, conviction rates across sites and motives were extremely high. These findings suggest that prosecutorial case screening (and perhaps investigative pre-screening as well) may be too stringent--in other words, that there are promising arson cases that are either never presented to prosecutors or are rejected at screening. Strong support for this view comes from the Cleveland experience: apparently lenient screening, heavily circumstantial cases, but the highest overall and trial conviction rates among the four study sites.

We recommend that prosecutorial standards for arson case acceptance be liberalized to admit more "marginal" cases while still complying with minimum legal and ethical requirements for filing. (Typically, the minimum requirement is that a case be able to withstand a motion for directed verdict of acquittal.) Even if a more aggressive and venturesome prosecutorial approach results in reduced conviction rates, this should be more than counterbalanced by an increased deterrent effect, particularly on fraud arsonists.

7.2.1 Screening Process

As noted above, particularly if investigators become less conservative in their pre-screening of cases for presentation, informal consultation between investigators and prosecutors early in case development is extremely

useful. Moreover, formal presentation and screening seem most efficient if they occur before formal filing of any charges in court. This screening approach is more costly and time-consuming for the prosecutor but it appears that the early application of legal expertise to the screening and charging process achieves greater savings in investigative resources and court costs.

To achieve as much consistency as possible in the prosecutorial screening of arson cases, we recommend development and use of specific screening guidelines. As discussed in Chapter 5 of the report, the elements included in such guidelines might include criteria for evidentiary strength in such key areas as evidence of incendiary origin, motive, and linkage of the suspect to the commission of the arson. Guidelines might also include standards for the reliability and credibility of witnesses. Categorical criteria such as fire seriousness or type of property burned might also be considered in developing screening guidelines, particularly if statutory language or resource constraints require systematically excluding some cases from prosecution.

We recommend that prosecutors provide arson investigators with prompt written and/or oral feedback on rejected cases. This can be extremely useful both in terms of improving those particular cases for possible resubmission and for purposes of enhancing the general level of investigators' understanding of the evidentiary standards for case acceptance.

In general, we found that arson statutes in the four sites are considered adequate to cover the types of arson offenses faced. Indeed, arson statutes have been tightened considerably in recent years, especially to ensure their coverage of arson-for-profit schemes. However, there are still some gaps in existing statutes. For example, the New York statute does not cover burning wildlands or personal property. Prosecutors should periodically re-evaluate their states' arson statutes to ensure that they cover the types of arson offenses occurring in the jurisdiction.

In addition, although statutory language on this subject is often quite vague, many prosecutors take a conservative view of whether an arson fire has endangered persons or property. We believe that prosecutors should also, within statutory and resource constraints, adopt a broader view of endangerment so as to accept for prosecution cases involving potential as well as actual endangerment of firefighters and civilians. This issue might be considered in revisions of the arson statute.

7.2.2 Prosecutorial Screening Structure

The sample of jurisdictions under study include examples of various structures of prosecutorial screening from the centralized/specialized to the decentralized/non-specialized. Our findings suggest that some form of concentration in the prosecutorial screening of arson cases is advisable. The most desirable approach appears to be the specialized/centralized approach, in which all arson cases are screened by the same attorney or unit in the office. This attorney or unit screens only arson cases and is invariably also responsible for actual prosecution of some or all of the arson cases accepted.

The centralized/specialized screening approach has a number of advantages, as discussed in Chapter 5. These include the following:

- It facilitates development of the greater technical knowledge of fire and arson necessary to evaluate and screen cases with optimum consistency and effectiveness.
- Combined with specialized vertical prosecution, it may foster more realistic screening, since the same attorney who accepts the case must also prosecute it. Of course, it is important that this concern not lead to overly conservative screening.
- It facilitates implementing innovative uses of screening such as "preventive prosecution" (holding suspected arson-for-profit cases under consideration in order to deter the suspected arsonist from filing an insurance claim) and tracking arsonists who may enter the system as minor firesetters but move on to setting more serious fires.
- It facilitates developing closer working relationships with investigators which are extremely helpful in developing cases and it permits monitoring of ongoing investigations which helps guard against investigative information loss.
- It facilitates developing full and detailed knowledge of the arson and related statutes, which is very important in the often subtle and complex charging decisions required in arson cases.
- It inculcates a deeper sense of the seriousness of arson, particularly in terms of the actual and potential dangers posed to firefighters, civilians, individual properties, and whole neighborhoods.

The centralized/non-specialized approach to screening is probably the next most desirable approach. It enables screening attorneys to develop some expertise in evaluating arson cases. However, since the screening unit must handle many other types of cases as well as arson, the attorneys will not be able to develop the depth of knowledge possible under a fully specialized approach. The centralized/non-specialized screening approach has helped to produce generally close and cordial investigator-prosecutor relations in Denver. But, as noted in Chapter 5, there is evidence of some inconsistency in screening decisions in that city, particularly with regard to fraud cases which seem to be judged by more stringent standards than other arsons.

Finally, the decentralized/non-specialized approach seems most likely to produce inconsistent and uninformed screening decisions. However, these deficiencies can sometimes be overcome if investigators cultivate contacts with a few attorneys in the office, making them, in effect, special arson prosecutors.

7.3 Arson Prosecution

This study has shown that, contrary to commonly-voiced opinion, overall conviction rates in arson cases are as high as those for most categories of felonies. In short, under current case presentation and screening standards, convictions can be obtained in most arson cases accepted for prosecution. At the same time, conviction rates in arson cases reaching trial appear to be somewhat lower than the overall conviction rates. This discrepancy between trial conviction rates and overall conviction rates does not appear in other felony categories and thus should not be attributed to case screening or trial/dismissal policies. It suggests that convictions at trial may indeed be harder to obtain in arson cases than in other types of crimes. The increasing expertise of the defense bar in arson cases makes it even more important to address the issues presented by arson trials.

7.3.1 Case Preparation and Trial Strategy

The key evidentiary areas in an arson case are evidence of incendiary origin, evidence of motive, and evidence linking the defendant to the commission of the arson. Linkage evidence is of obvious importance and prosecutors typically give sufficient attention to this area.

Several prosecutors interviewed stated that cases were rarely lost because of problems in establishing the incendiary origin of the fire. However, we did find evidence that this occurs. Therefore, prosecutors handling arson cases--particularly those cases going to trial--should ensure that the evidence and testimony they will present on incendiary origin is intelligible and convincing. Visual aids such as diagrams, photographs, and videotapes can often help a judge or a jury understand a complex argument concerning incendiary origin. A logical and understandable presentation is particularly important in cases which rely on negative corpus evidence (elimination of accidental causes). Moreover, in such cases prosecutors must be prepared to counter the common defense argument that the fire was caused by careless--but accidental--disposal of a match or cigarette. (There are scientific studies showing that a discarded match or cigarette will rarely start a fire.) The use of an advisory witness (the arson investigator who investigated the case, or at least an investigator knowledgeable of issues of fire cause and origin, who attends the trial and advises the prosecutor on technical points) can be of great benefit, if this is permitted under the law or court rules of the jurisdiction. Advisory witnesses are particularly useful if the case is being tried by an inexperienced prosecutor or if the defense puts on its own expert witness to offer an alternative explanation of the cause and origin of the fire.

Motive is not a legal element of the crime of arson. However, prosecutors should give careful attention to developing motive evidence since it may be the key to rendering the case intelligible and convincing to a jury. A number of cases in our sample ended in acquittals, according to prosecutors, because of unconvincing evidence of motive. In general, direct statements establishing motive are more effective than reliance on complex inferences from documents or financial records.

As noted above, this study's findings do not suggest that prosecutors should increase their direct involvement in the technical, fire-related aspects of arson investigation. However, there are several investigative areas related to development of motive information in which prosecutors' resources have been brought to bear with some success: accounting and real estate. Particularly in jurisdictions experiencing serious problems with fraud arson, prosecutors might wish to consider employing accountants and

real estate specialists, at least on an as-needed consulting basis, to assist in researching property transactions and financial conditions of defendants. Such information can be crucial to establishing motive in fraud arson cases.

Finally, in considering all of these recommendations on prosecutorial strategy, it should be borne in mind that juries are unpredictable: even the most carefully prepared and effectively presented case is not guaranteed to result in a conviction.

7.3.2 Prosecution Structure

The sites under study represent a range of arson prosecution structures from the non-specialized/horizontal to the specialized/vertical. The case data do not suggest that any one structural approach is likely to produce higher conviction rates than another. However, qualitative and anecdotal evidence suggest that at least limited specialization is advisable, if it can be accommodated within the overall structure of the prosecutor's office.

As noted above, an important guiding concept for this study--and one whose validity is confirmed by our data--is that arson is not a monolithic crime. Arson cases, classified according to motive, not only differ in the types of evidence typically involved, but they also vary widely in the complexity and technical nature of that evidence. Therefore, we believe that although a totally specialized/vertical approach to arson prosecution is probably not harmful, it may not be necessary. As already noted, we advocate centralized/specialized screening of arson cases, but we suggest coupling that with a "hybrid" approach to actual prosecution. Under this approach, complex fraud arson cases, cases with difficult technical issues of fire cause and origin and other potential difficulties, would be handled vertically by a special arson prosecutor, while the more numerous simple cases would be handled by non-specialized felony trial prosecutors. The problems of establishing opportunity or linking the defendant to the crime are neither especially technical nor unique to arson cases. Indeed, they do not appear to differ markedly from the same evidentiary elements of other prosecutions. Thus, there is no persuasive reason that arson cases whose major problems lie in linkage evidence should be handled by specialized prosecutors. Moreover, assigning these cases to a special prosecutor may be an inefficient use of prosecutorial resources.

At the same time, it is also inefficient to spread arson cases involving complex technical issues among non-specialized prosecutors. The small number of these cases almost insures that each will be handled by a different individual--or at least that assignments to arson cases will be widely spaced in time. That each of these prosecutors will have to learn--or re-learn--the technical issues involved is not only inefficient but also potentially detrimental to the quality of prosecutions. This may become an increasingly serious problem as the defense bar becomes more skilled in arson cases. If there are not enough cases to keep a specialized arson prosecutor occupied on a full-time basis, the specialized attorney might be included in a fraud or economic crime unit. (This is the structure used in the Bronx.)

Several additional arguments for prosecutorial specialization are worth noting: it facilitates development of close relations with insurance officials which, in turn, are important in generating regular exchange of investigative information; and it permits a prosecutor to become familiar with, and thus better equipped to counter the arguments of the relatively small number of defense cause-and-origin experts active in most jurisdictions.

7.4 Suggestions for Further Research

A number of suggestions for further research follow naturally from the findings and recommendations of this study. Several of them have already been mentioned in this chapter. However, it is worth bringing them together with several others in a summary listing.

- Systematic Study of the Nature and Extent of Arson. As noted in Chapter 2, there are grave problems in arson data collection and significant discrepancies among currently available data sources on the scope and character of arson. It appears that intensive study of a sample of jurisdictions might clarify the picture and lead to some more reliable estimates of the arson problem.[1]
- Demonstration and Evaluation of Arson Investigative Targeting Strategies such as New York City's "Red Cap" Program.
- Development of a Profile or Predictive Model of Arson Motive from Expanded Data on Fire Characteristics.[2]

---

[1] For a possible approach to such a study, see Richard Ku, Theodore M. Hammett, Deborah Day Emerson et al., "Arson Control," Chapter 1.

[2] A preliminary profile is presented in Angelo Pisani, "Identifying Arson Motives," Fire and Arson Investigator 32 (June 1982), pp. 18-24.

The present study collected basic fire characteristics, but more detailed data--for example, on exact point of origin, material ignited, time of ignition--would be required to develop a meaningful profile. If it could be developed, such a profile might assist investigators in identifying arson motives and planning subsequent investigation strategies.

- Study of Information Exchange between Insurance Companies and Public Arson Investigators. Although Arson Reporting-Immunity laws designed to facilitate information flow are in effect in all four states involved in this study, the data show an extremely low level of insurer involvement in the sampled investigations. Since insurers and public investigators can be of great potential benefit to one another, it is worth examining the reasons for the current low level of cooperation and identifying the potential methods for increasing it.

- Analysis of Arson Case Drop-Out and Solvability Factors During the Investigative Stage. Our data suggest that arson cases are eliminated from possibility of prosecution through various direct and indirect forms of prescreening. However, intensive study of a sample of investigation units could illuminate this process by determining how case attrition is distributed according to the following causes: initial lack of suspects; lack of resources to pursue cases; failure to follow-up on tangible leads; and decisions, based on consideration of evidence, not to present to the prosecutor. This analysis could be combined with a study of solvability factors based on a sample of past investigations. This analysis might help investigative units identify categories of cases worthy and unworthy of follow-up investigation.

- Cost-Benefit Analysis of Increasing Investigative Staff. Since it is not clear that additional staff would significantly increase the success rate in arson investigations, it might be advisable to conduct a study in a sample of jurisdictions to devise and test cost-benefit analyses which could be undertaken before deciding to add investigative staff.[1]

[1] For a possible approach, see Abt Associates Inc., "Evaluation Options in Arson Control," Section 2.2.

APPENDIX A

- Sampling Plan
- Analytic Methods
- Case Record Data Collection Instruments

A.1 Case Sampling Plan

Tables A.1, A.2, and A.3 describe the sampling plans for the Investigation, Prosecution, and Supplemental Declination Samples. Sample definitions, sizes, interrelationships and analytic uses are described in Chapter 1 of this report.

A.2 Analytic Methods

As reflected in the text, the bulk of the analysis was performed by means of simple descriptive statistics, measures of central tendency, and cross-tabulations. The Statistical Analysis System (SAS) was used for all data analyses. We also conducted three sets of regression analyses. One set, summarized in Chapter 4, describes the relationship between the decision whether or not to present a case for prosecution and a variety of case characteristics, including primarily the presence of various types of evidence. Another, summarized in Chapter 5, describes the relationship between the decision whether or not to accept a case for prosecution and similar case attributes. In Chapter 6, we report on a model relating the likelihood of conviction to case characteristics for all prosecuted defendants in our sample whose cases went to trial.

In this section, we discuss the regression models referred to in the report and display the models in more detail. Before actually presenting the results, we will consider some of the relevant methodological issues. First, we decided to develop separate models for each site. Since patterns of screening seem to some extent site-specific, we wanted to have the ability to describe such differences.

Second, since the analyses of the decision to present and the decision to accept were done at the case level, we were faced with three types of cases: 1) those in which all defendants were actually accused of setting the fire; 2) those in which at least one but not all were accused of setting the fire; and 3) those in which none of the defendants were accused of actually setting the fire. However, for cases going to trial, we could disaggregate our data to the level of individual defendants. For the analysis of conviction versus non-conviction, we therefore ran two models, one including "accused firesetters" only, and the other including all defendants.

For the case level analyses, we decided to focus only on cases in which at least one of the defendants was accused of actually setting the

Table A.1

Sampling Plan for Investigation Sample

Site	Source(s)	Type	Period[a]	Universe in Sampling Frame	Remarks
(Bronx Co.)	Chronological log of investigations in Police Arson & Explosion Unit	Random/Initiated (A&E case number)	1981	2388	Exclude bomb cases and "unfounded" cases
Denver (City & Co.)	Chronological log of UCR offense reports filed, in Fire Department Arson Bureau	Systematic/Initiated	7/1/80-6/30/81	625	Exclude "unfounded" cases
San Diego (San Diego Co.)	Chronological Crime Complaint Log in Metro Arson Strike Team (city) and logs of 3 investigators in Sheriff's Arson/Explosion Unit (County)	Random (proportional to total cases contributed by MAST and Sheriff's Dept.)/ Initiated	7/1/81-12/31/81 (shorter period chosen because Metro Arson Strike Team not in full operation until midway through 1981)	MAST: 210 Sheriff: 104	Exclude accidental and undetermined-cause fires; bomb/fireworks cases; fires caused by children playing with matches; and cases involving possession of molotov cocktail but no fire.
Cleveland (Cuyahoga Co.)	Chronological Log of Investigations in Fire Dept. Fire Investigation Unit	Random/Initiated	1981	1115	Exclude undetermined and accidental fires.

[a] Periods were selected to allow sufficient time for cases to have completed the investigative and prosecutorial stages, based on estimates of the length of these stages from each site.

Table A.2

Sampling Plan for Prosecution Sample

Site	Source(s)	Type	Period	Remarks
Bronx (Bronx County)	Disposition log in Arson/ Economic Crime Bureau, DA's office	Closed/universe	Last 100 dispositions through date sample chosen	Felonies and misdemeanors.
Denver (City & County)	Arrest Log in Fire Dept. Arson Bureau/Card Files in DA's office	Initiated/universe	Last 100 cases filed on or before 6/30/81; required cases filed beginning 1/1/80	Felony and misdemeanor arson and incendiary device filings.
San Diego (San Diego County)	DA's computerized case-tracking system, printout of arson and arson-related insurance fraud cases filed in 1980-1981	Closed/universe	Last 100 dispositions of cases filed in 1980-1981	Felonies and misdemeanors (Calif. has "flip-flop" provision--many arsons can be either felony or misdemeanor)
Cleveland (Cuyahoga County)	Prosecuting Attorney's Printouts, Arson Case Dispositions 9/1/80-6/30/82	Closed/universe	Last 100 dispositions through 6/30/82	Felony arsons only

Table A.3

Sampling Plan for Supplemental Declined Sample

Site	Source(s)	Type	Period	Remarks
Bronx (Bronx County)	Chronological log of investigations in Police Arson and Explosion Unit; Arrest Log in DA's Arson/ Economic Crime Bureau	Initiated/universe	1981	All arrests and "exceptional clearances" (from A&E log) resulting in declination of arson charges
Denver (City & County)	Case files in Arson Bureau	Initiated/universe	7/1/80-6/30/81	Sample identified by examining all investigation case files for period.
San Diego (San Diego County)	DA's printout of 1981 arson rejections; File of Complaint Request Evaluations in Arson Prosecutor's office	Closed/universe	7/1/81-12/31/81	Sample identified by merging the two sources.
Cleveland (Cuyahoga County)	Case Files in Police Arson Unit	Initiated/universe	1981	Sample identified by examining all investigation case files for period.

fire. We felt that the small minority of cases involving only individuals alleged to have hired someone to set the fire might be qualitatively different--for example, decisions on them might be affected by different evidence considerations.

Third, to account for any remaining differences between fraud and other cases, we used special dummy variables. In addition to the dummy itself, our models included interaction terms corresponding to the combination of fraud and each of the evidence variables. In this way, a differential weight of a particular type of evidence in fraud cases could be detected.

We did not further sub-divide the sample by motive, because we felt that the motive definitions were somewhat subjective, with many cases rather difficult to assign definitively to a single motive category. Moreover, since the existence of motive evidence was an explanatory factor in our model, such prior division of the sample appeared to involve us in some circularity.

Fourth, it is important to note that different configurations of the sampled cases were used for different regression analyses. For studying the decision to present, we had cases from the investigation sample which had identified suspects but were not presented to the prosecutor and we had presented cases from all three samples (investigation, prosecution, and declination). As a result, the available sample of presented cases was much larger, but the relative proportions of declined and prosecuted cases in our sample was not representative of the total caseload. Consequently, it is possible that the coefficients differ somewhat from those that would have been obtained from a random sample. Since our purpose in the analysis was primarily to identify key variables and not to specify precisely a predictive model, this does not seem to be a serious problem.

Similarly, in studying the decision to accept, we have used the entire augmented prosecution sample and the entire augmented declination sample. Here again, the relative proportions are not necessarily representative of those in the total caseload. Therefore, the same caveats are applicable to these analyses.

Finally, we note that with the kind of dichotomous outcomes we are studying (presented versus non-presented, accepted versus rejected, conviction versus non-conviction), a more sophisticated analysis could in principle be

developed based on logit regression or log-linear modeling.[1] However, for the essentially exploratory research undertaken here, the use of ordinary least-squares regression technique was deemed to be both adequate and easier to interpret.

With these points in mind, we now turn to the models. Since the complete model of conviction versus non-conviction was already presented in Chapter 6, we will not repeat it here. For the regression relating to the decision to present, we have displayed two main models (Tables A4 and A5). The first incorporates a set of general evidence categories as independent variables, along with a dummy to identify fraud cases, and a dummy to indicate witness problems. The second includes a larger set of more specific evidence categories, along with fraud and witness problem dummies.[2] All of the variables are dichotomous. That is, they are coded on a 0-1 basis, with 1 representing the presence of the particular attribute. In addition, as noted in Chapter 4, we had anecdotal and qualitative evidence that some cases were not presented because suspects and leads were not followed up. We therefore ran supplemental analyses that included a dummy to indicate evidence of such a failure to follow-up on investigative information. The results are displayed in Tables A6 and A7.

Models for the decision to accept for prosecution used the same sets of independent variables as the models for the decision to present. The results are presented in Tables A8 and A9.

The final regression models presented in this report were computed using the SAS GLM (General Linear Model) subroutine. However, some of the preliminary analysis employed the STEPWISE subroutine, which is more convenient for exploratory research to determine which variables are most useful in predicting the outcome.

---

[1] A. Anderson, W. Auquier, W. Hauck, D. Oakes, W. Vandaele, and H. Weisberg, Statistical Methods for Comparative Studies (New York: John Wiley, 1980), Chapters 9 and 10.

[2] Note that the sample sizes for the two models differ somewhat as a result of different patterns of missing data.

Table A.4

Regression Model for Decision to Present: General Evidence Types

Variable		Site			
		Bronx	Denver	San Diego	Cleveland
	Intercept	.52	.56	-.09	.64
1.	Fraud	.14	.51+	.94**	-.11
2.	Evidence of incendiary origin	.05	.18**	.27**	.01
3.	Evidence of motive	.03	-.07	.15*	.02
4.	Evidence of opportunity	.31**	.14+	.55**	.21
5.	Direct evidence of suspect commission of arson	.16**	.20**	.13*	.03
6.	Accomplice testimony	-.02	.15+	0	.13
7.	Witness problem	.06	-.05	.06	.21**
8.	(1) and (2)	-.11	-.51+	-1.15**	0
9.	(1) and (3)	0	0	0	-.14
10.	(1) and (4)	0	-.14	0	.15
11.	(1) and (5)	-.09	0	.20	.21
12.	(1) and (7)	.02	0	0	.15
13.	(1) and (6)	0	.05	.27	-.30
	R^2	.364	.184	.461	.180
	n	105	160	150	159

Statistical significance is indicated as follows:

+ = $p \leq .10$

* = $p \leq .05$

** = $p \leq .01$

Table A.5

Regression Model for Decision to Present:
Specific Evidence Types

Variable		Site			
		Bronx	Denver	San Diego	Cleveland
	Intercept	.89	.73	.44	.81
1.	Fraud	.03	.23	1.24*	-.06
2.	Presence of accelerant	.05	.03	-.02	.12+
3.	Suspect observed at scene	.08**	.16**	.24**	.16*
4.	Suspect statement on opportunity	-.02	.01	.17*	.04
5.	Confession	.04	.10+	.10	-.06
6.	Eyewitness to commission of arson	.03	.13*	.05	.02
7.	Witness problem	.01	-.04	.03	.15+
8.	Threat against victim by suspect	.02	-.10+	.07	.04
9.	Suspect statement about motive	.02	.04	0	.09
10.	Expert evidence on cause and origin	-.04	.01	.08	-.19*
11.	Accomplice testimony	.03	.07	-.07	.15
12.	(1) and (2)	-.04	0	-.91+	-.19
13.	(1) and (3)	0	-.16	-1.24*	.34
14.	(1) and (4)	.02	-01	0	-.13
15.	(1) and (5)	-.01	0	.90*	.31
16.	(1) and (6)	0	0	.95	-.27
17.	(1) and (7)	.02	.04	.97*	.53
18.	(1) and (8)	0	.10	0	0
19.	(1) and (9)	-.02	-1.04**	0	0
20.	(1) and (10)	0	0	0	0
21.	(1) and (11)	-.03	0	-.93+	.10
	R^2	.143	.287	.367	.223
	n	99	141	139	128

Statistical significance is indicated as follows:

+ = $p \leq .10$

* = $p \leq .05$

** = $p \leq .01$

Table A.6

Supplementary Regression Model for Decision to Present:
General Evidence Types

Variable		Site			
		Bronx	Denver	San Diego	Cleveland
	Intercept	.52	.56	-.07	.93
1.	Fraud	.14	.51	.93**	-.10
2.	Failure to follow up	0	0	-.11	-.86**
3.	Evidence of incendiary origin	.05	.18**	.27**	-.03
4.	Evidence of motive	.03	-.07	.14*	-.03
5.	Evidence of opportunity	.31**	.14+	.53**	.06
6.	Direct evidence of suspect commission	.16**	.20**	.13*	.01
7.	Accomplice testimony	-.02	.15*	0	.07
8.	Witness problem	.06	-.05	.06	.06
9.	(1) and (2)	0	0	0	-.37
10.	(1) and (3)	-.10	-.51+	-1.13**	.26+
11.	(1) and (4)	0	0	0	.20
12.	(1) and (5)	0	-.14	0	-.22
13.	(1) and (6)	-.09	0	.20	.11
14.	(1) and (7)	0	.05	.27	.58
15.	(1) and (8)	.02	0	0	-.28
	R^2	.364	.184	.464	.686
	n	105	160	150	159

Statistical significance is indicated as follows:

+ = $p \leq .10$

* = $p \leq .05$

** = $p \leq .01$

Table A.7

Supplementary Regression Model for Decision to Present:
Specific Evidence Types

Variable		Site			
		Bronx	Denver	San Diego	Cleveland
	Intercept	.89	.73	.50	.90
1.	Fraud	.03	.23	.20*	.10
2.	Failure to follow up	0	0	-.28*	-.90**
3.	Presence of accelerant	.05	.03	-.04	.03
4.	Suspect observed at scene	.08*	.16**	.23**	.09*
5.	Suspect statement about opportunity	-.02	.01	.16*	.04
6.	Confession	.04	.10+	.10	-.06
7.	Eyewitness to commission of arson	.03	.13*	.04	.01
8.	Witness problem	.01	-.04	.03	.06
9.	Threat against victim by suspect	.02	-.10	.07	-.02
10.	Suspect statement about motive	.02	.04	-.01	.06
11.	Expert evidence on cause and origin	-.04	.01	.07	-.06
12.	Accomplice testimony	.03	.07	-.06	.05
13.	(1) and (2)	0	0	0	-.10
14.	(1) and (3)	-.04	0	-.88+	.02
15.	(1) and (4)	0	-.16	-1.23*	-.09
16.	(1) and (5)	.02	.01	0	-.10
17.	(1) and (6)	-.01	0	.89*	.06
18.	(1) and (7)	0	0	.96	-.01
19.	(1) and (8)	.02	.04	.97	.99+
20.	(1) and (9)	0	.10	0	0
21.	(1) and (10)	-.02	-1.04	.01	0
22.	(1) and (11)	0	0	0	0
23.	(1) and (12)	-.03	0	-.94	-05
	R^2	.143	.287	.400	.705
	n	99	141	139	128

Statistical significance is indicated as follows:

+ = $p \leq .10$

* = $p \leq .05$

** = $p \leq .01$

Table A.8

Regression Model for Decision to Accept: General Evidence Types

Variable		Site			
		Bronx	Denver	San Diego	Cleveland
	Intercept	.94	.28	.53	.16
1.	Fraud	.09	-.36	-.47	.09
2.	Evidence of incendiary origin	.02	.07	.18	.10+
3.	Evidence of motive	.02	.08	-.06	.10*
4.	Evidence of opportunity	-.04	.31**	0	.64**
5.	Direct evidence of suspect commission	.06	.20	.29**	.04
6.	Accomplice testimony	.03	-.07	-.10	-.06
7.	Witness problem	-.13+	.01	-.14	-.43**
8.	(1) and (2)	.12	-.08	-.18	.20
9.	(1) and (3)	0	0	0	.13
10.	(1) and (4)	0	-.31	0	-.38
11.	(1) and (5)	-.19	0	.71	.10
12.	(1) and (7)	0	-.01	.64	-.49
13.	(1) and (6)	-.03	0	.10	.08
	R^2	.072	.262	.220	.672
	n	100	137	130	138

Statistical significance is indicated as follows:

+ = $p \leq .10$

* = $p \leq .05$

** = $p \leq .01$

Table A.9

Regression Model for Decision to Present: Specific Evidence Types

Variable		Site			
		Bronx	Denver	San Diego	Cleveland
	Intercept	.89	.73	.44	.81
1.	Fraud	.03	.23	1.24*	-.06
2.	Presence of accelerant	.05	.03	-.02	.12+
3.	Suspect observed at scene	.08**	.16**	.24**	.16*
4.	Suspect statement on opportunity	-.02	.01	.17*	.04
5.	Confession	.04	.10+	.10	-.06
6.	Eyewitness to commission of arson	.03	.13*	.05	.02
7.	Witness problem	.01	-.04	.03	.15+
8.	Threat against victim by suspect	.02	-.10+	.07	.04
9.	Suspect statement about motive	.02	.04	0	.09
10.	Expert evidence on cause and origin	-.04	.01	.08	-.19*
11.	Accomplice testimony	.03	.07	-.07	.15
12.	(1) and (2)	-.04	0	-.91+	-.19
13.	(1) and (3)	0	-.16	-1.24*	.34
14.	(1) and (4)	.02	-01	0	-.13
15.	(1) and (5)	-.01	0	.90*	.31
16.	(1) and (6)	0	0	.95	-.27
17.	(1) and (7)	.02	.04	.97*	.53
18.	(1) and (8)	0	.10	0	0
19.	(1) and (9)	-.02	-1.04**	0	0
20.	(1) and (10)	0	0	0	0
21.	(1) and (11)	-.03	0	-.93+	.10
	R^2	.143	.287	.367	.223
	n	99	141	139	128

Statistical significance is indicated as follows:

+ = $p \leq .10$

* = $p \leq .05$

** = $p \leq .01$

A.3 Case Record Data Collection Instruments

This part of the appendix presents the instruments used to collect data from the investigation and/or prosecution files of the sampled arson cases.

Major Coding Problems

Coded by: _____
Date Begun: _____
Date Completed: _____
Reviewed by: _____

ARSON ADJUDICATION STUDY

Case Record Data Collection

CASE AND FIRE LEVEL DATA

Bronx FM Run# _____ A&E Case# _____ Arrest# _____	Denver FD Incident# _____ PD Report# _____ Court# _____
San Diego Run#/Police# _____ Sheriff's Case# _____ DA# _____ Other Investigative Unit# _____	Cleveland FD Incident# _____ PD Complaint# _____ Court# _____ Other Investigative Unit# _____

BEGIN CARD 01

AAI Record Number: [ ] SITE [ ] SAMPLE [ ][ ][ ] CASE [0] CASE FORM — 1-6/ 7-8/01

Was this case selected in the first 100 investigative cases?

1 Yes 2 No — 9/

Total number of defendants this case. (For cases not resulting in prosecution, enter "00") [ ][ ] — 10-11/

Investigators involved (names and roles in case)

_____

_____

_____

Prosecutors involved (names and roles in case)

_____

_____

_____

Defense attorneys (names)

_____

_____

_____

Judge(s) involved (names)

_____

_____

_____

CARD 01

C1. Number of separate "fire incidents" this case: ☐☐ 12-13/

C2. In what type(s) of property did fire(s) start? (CIRCLE ONE PROPERTY CATEGORY FOR EACH FIRE. IF MORE THAN FIVE FIRES, CODE MOST RECENT FIVE.)

	Fire 1		Fire 2		Fire 3		Fire 4		Fire 5	
Public assembly, educational, health care or penal property	1	14/	1	15/	1	16/	1	17/	1	18/
Residential property (includes garages and other outbuildings of residential structures)	2		2		2		2		2	
Mercantile, business, industrial, utility, defense, agriculture or manufacturing property (includes warehouses)	3		3		3		3		3	
Vehicle or boat	4		4		4		4		4	
Grass, field, forest or wild lands	5		5		5		5		5	
Other (SPECIFY)	6		6		6		6		6	

C3. At the time of fire(s), building(s) was/were: (CIRCLE ONE RESPONSE FOR EACH CATEGORY FOR EACH FIRE: N.B. MAINTAIN FIRE NUMBERING USED IN QUESTION C2.)

Vacant/Abandoned	1	19/	1	20/	1	21/	1	22/	1	23/
In use, but no persons present in building at time of fire	2		2		2		2		2	
Persons present in building at time of fire	3		3		3		3		3	
Not applicable.(e.g. non-structural fire)	4		4		4		4		4	

C4. How many fatalities were there in each fire? (ENTER "00" IF NONE)

	Fire 1		Fire 2		Fire 3		Fire 4		Fire 5	
Civilian	☐☐	24-25/	☐☐	32-33/	☐☐	40-41/	☐☐	48-49/	☐☐	56-57/
Firefighter	☐☐	26-27/	☐☐	34-35/	☐☐	42-43/	☐☐	50-51/	☐☐	58-59/

C5. How many nonfatal injuries, each fire? (ENTER "00" IF NONE)

Civilian	☐☐	28-29/	☐☐	36-37/	☐☐	44-45/	☐☐	52-53/	☐☐	60-61/
Firefighter	☐☐	30-31/	☐☐	38-39/	☐☐	46-47/	☐☐	54-55/	☐☐	62-63/

1-6/dup
7-8/02

C6. Dollar loss, each fire:
(ENTER ALL 8s IF NO RECORD)

Fire 1	$ [ ][ ] , [ ][ ][ ] , [ ][ ][ ]	9-16/
Fire 2	$ [ ][ ] , [ ][ ][ ] , [ ][ ][ ]	17-24/
Fire 3	$ [ ][ ] , [ ][ ][ ] , [ ][ ][ ]	25-32/
Fire 4	$ [ ][ ] , [ ][ ][ ] , [ ][ ][ ]	33-40/
Fire 5	$ [ ][ ] , [ ][ ][ ] , [ ][ ][ ]	41-48/

C7. How long after each fire did any investigation begin (other than by police patrolmen or fire suppression forces)? (CIRCLE ONE RESPONSE FOR EACH FIRE)

	Fire 1		Fire 2		Fire 3		Fire 4		Fire 5	
Investigation began when fire suppression forces still on scene...........................	1	49/	1	50/	1	51/	1	52/	1	53/
Investigation began after suppression forces left scene....................................	2		2		2		2		2	
No investigation other than by police patrolmen or fire suppression forces.................	3		3		3		3		3	
Other (EXPLAIN)_______________	4		4		4		4		4	
Don't know..	8		8		8		8		8	

C8. Was lab analysis of fire debris initiated? (CIRCLE ONE RESPONSE FOR EACH FIRE)

Yes	NR		Yes	NR		Yes	NR		Yes	NR		Yes	NR	
1	2	54/	1	2	55/	1	2	56/	1	2	57/	1	2	58/

C9. Did lab analysis indicate that an accelerant was present? (CIRCLE ONE RESPONSE FOR EACH FIRE)

	Fire 1		Fire 2		Fire 3		Fire 4		Fire 5	
Yes..	1	59/	1	60/	1	61/	1	62/	1	63/
No...	2		2		2		2		2	
Not applicable.................................	3		3		3		3		3	
Don't know.....................................	8		8		8		8		8	

CARD 02

C10. Did lab analysis identify specific accelerant? (CIRCLE ONE RESPONSE FOR EACH FIRE)

	Fire 1	Fire 2	Fire 3	Fire 4	Fire 5
Yes	1 64/	1 65/	1 66/	1 67/	1 68/
No	2	2	2	2	2
Not applicable	3	3	3	3	3
Don't know	8	8	8	8	8

BEGIN CARD 03
1-6/dup
7-8/03

C11. Were photographs/diagrams of fire scene available? (CIRCLE ONE RESPONSE FOR EACH FIRE)

Fire 1		Fire 2		Fire 3		Fire 4		Fire 5	
Yes	NR	Yes	NR	Yes	NR	Yes	NR	Yes	NR
1	2 9/	1	2 10/	1	2 11/	1	2 12/	1	2 13/

C12. Did firefighters make observations of fire characteristics indicating arson? (CIRCLE ONE RESPONSE FOR EACH FIRE)

Fire 1		Fire 2		Fire 3		Fire 4		Fire 5	
Yes	NR	Yes	NR	Yes	NR	Yes	NR	Yes	NR
1	2 14/	1	2 15/	1	2 16/	1	2 17/	1	2 18/

C13. Was expert testimony available on cause and origin (other than firefighters and lab analysis)? (CIRCLE ONE RESPONSE IN EACH CATEGORY OF TESTIMONY FOR EACH FIRE)

	Fire 1		Fire 2		Fire 3		Fire 4		Fire 5	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Multiple origins	1	2 19/	1	2 28/	1	2 37/	1	2 46/	1	2 55/
Burn patterns	1	2 20/	1	2 29/	1	2 38/	1	2 47/	1	2 56/
Trailers	1	2 21/	1	2 30/	1	2 39/	1	2 48/	1	2 57/
Ignition device	1	2 22/	1	2 31/	1	2 40/	1	2 49/	1	2 58/
Presence of accelerants	1	2 23/	1	2 32/	1	2 41/	1	2 50/	1	2 59/
Elimination of accidental causes	1	2 24/	1	2 33/	1	2 42/	1	2 51/	1	2 60/
Other (SPECIFY)_____	1	2 25/	1	2 34/	1	2 43/	1	2 52/	1	2 61/
Other (SPECIFY)_____	1	2 26/	1	2 35/	1	2 44/	1	2 53/	1	2 62/
Other (SPECIFY)_____	1	2 27/	1	2 36/	1	2 45/	1	2 54/	1	2 63/

CARD 03

C14. Types of prosecutor involvement in case prior to formal presentation by investigators:

	YES	NO RECORD	
Attended fire scene(s).....	1	2	64/
Stake-out/surveillance.....	1	2	65/
Advice on warrant/arrest.....	1	2	66/
Development of cooperating witness.....	1	2	67/
Other investigative support such as paper chase (EXPLAIN)_____	1	2	68/
Other legal advice (EXPLAIN)_____	1	2	69/
If no documented involvement prior to formal presentation, circle here (N.B.: IF "1" IS CIRCLED HERE, ALL OTHER TYPES OF PROSECUTOR INVOLVEMENT SHOULD BE CODED "2")	1		70/

BEGIN CARD 04
1-6/dup
7-8/04

C15. Which units were involved in the investigation or in making an arrest in this case? (CIRCLE ALL THAT APPLY)

		YES	NO RECORD	
Bronx	Police Arson & Explosion Unit.....	1	2	9/
	Fire Marshals (NYFD).....	1	2	10/
	Housing Authority Police.....	1	2	11/
	NYPD Homicide.....	1	2	12/
	Other NYPD.....	1	2	13/
Denver	Fire Department Arson Bureau.....	1	2	14/
	PD Homicide Bureau.....	1	2	15/
	Other Denver PD.....	1	2	16/
San Diego	Metro Arson Strike Team.....	1	2	17/
	Sheriff's Department.....	1	2	18/
	State Forestry Department.....	1	2	19/
	U.S. Forest Service.....	1	2	20/
	Other San Diego PD.....	1	2	21/
	Other jurisdiction's PD (SPECIFY)_____	1	2	22/
	Other jurisdiction's FD (SPECIFY)_____	1	2	23/

(CONTINUED)

CARD 04

		YES	NO RECORD	
Cleveland	Police Arson Unit (PAU).....	1	2	24/
	Fire Investigation Unit (FIU).....	1	2	25/
	Other Cleveland PD.....	1	2	26/
	Other jurisdiction's PD (SPECIFY)_____	1	2	27/
	Other jurisdiction's FD (SPECIFY)_____	1	2	28/
	Ohio Bureau of Criminal Investigation.....	1	2	29/
All Sites	State Fire Marshal.....	1	2	30/
	State Police.....	1	2	31/
	FBI.....	1	2	32/
	ATF.....	1	2	33/
	IRS.....	1	2	34/
	Insurance Co. Investigators.....	1	2	35/
	ICPI.....	1	2	36/
	Other (SPECIFY)_____	1	2	37/

C16. How many individuals were interviewed by law enforcement or fire personnel in the course of this investigation?

[ ][ ][ ] 38-40/

CARD 04

C17. Motive

	STRONG EVIDENCE	POSSIBLE MOTIVE	RULED OUT/ NO RECORD	
Fraud (included are fires for direct or indirect gain. Excluded are crime concealment fires.).....	1	2	3	41/
Pyromania, mental illness (included are fires started to gain recognition and vanity fires.).....	1	2	3	42/
Crime concealment (included are destruction of books/records, evidence of fire to conceal murder, criminal activity.).....	1	2	3	43/
Spite, revenge, anger.....	1	2	3	44/
Vandalism, malicious mischief.....	1	2	3	45/
Civil disturbance, terrorist activity.....	1	2	3	46/
Other (SPECIFY)_____	1	2	3	47/
If motive could not be established, circle here..... (N.B.: IF "1" IS CIRCLED HERE, ALL MOTIVE CATEGORIES SHOULD BE CODED "3")	1			48/

Briefly explain basis of motive determination:

_____

_____

_____

_____

_____

_____ 49-50/

CARD 04

C18. Date of earliest fire included in this case:

MONTH	DAY	YEAR	
			51-56/

C19. Date of most recent warrant (other than for failure-to-appear), arrest or information/indictment for any defendant in this case: (IF NONE, ENTER ALL 8'S)

MONTH	DAY	YEAR	
			57-62/

C20. Date of disposition (not including sentence or appeal) of last defendant disposed: (IF CASE DID NOT RESULT IN PROSECUTION, ENTER ALL 8'S)

MONTH	DAY	YEAR	
			63-68/

C21. Did any of these fires result in prosecution of any defendant?

1 Yes 2 No 69/

IF NO, SKIP TO QUESTION C24.

IF YES, ANSWER QUESTIONS C22 and C23.

C22. Which fire(s) resulted in prosecution?

	Yes	No	
Fire 1	1	2	70/
Fire 2	1	2	71/
Fire 3	1	2	72/
Fire 4	1	2	73/
Fire 5	1	2	74/
Other fire(s)	1	2	75/

CARD 04

C23. If any fires resulted in prosecution, indicate outcome (CIRCLE ONE ONLY):

All charges against all defendants dismissed after filing..... 01 76-77/

All defendants acquitted of all charges (includes NG-insanity).... 02

Case filed, no defendants convicted of most serious arson charge contained in original or final charging document, but at least one defendant pled to or was convicted of another non-arson charge..... 03

Case filed, no defendants convicted of most serious arson charge contained in original or final charging document, but at least one defendant pled to or was convicted of a lesser arson charge... 04

Case filed, at least one defendant pled to or was convicted of most serious arson charge contained in original or final charging document..... 05

Other (e.g. no probable cause found, mental condition of suspect/defendant)..... 06

(EXPLAIN)_____

PROSECUTED CASES: NOW SKIP TO DEFENDANT SUPPLEMENT

BEGIN CARD 05
1-6/dup
7-8/05

C24. IF none of these fires resulted in prosecution, indicate case outcome (CIRCLE ONE ONLY):

No suspects identified..... 07 9-10/

Suspect(s) identified, case not presented to prosecutor..... 08

Case presented but declined by prosecutor (all suspects)..... 09

Suspect(s) identified, case presented, warrant(s) issued, no arrests..... 10

Other (EXPLAIN)_____ 11

CARD 05

C25. What is the status of this investigation? (CIRCLE ONE RESPONSE)

Investigation pending (less than 3 months since last entry)... 1 11/

Investigation inactive (3 months or more since last entry).... 2

	Yes	No	
C26. Was this case presented for prosecution?	1	2	12/

IF YES, SKIP TO QUESTION C28.

IF NO, ANSWER QUESTION C27.

C27. If case not presented to prosecutor, why not? (CIRCLE ONE)

Mental condition of suspect..... 1 13/

Case considered insufficient by investigator..... 2

Other (EXPLAIN)_____ 3

Reason unknown..... 8

	Yes	No	
C28. Was this case presented but declined for prosecution?	1	2	14/

IF YES, ANSWER QUESTION C29.

IF NO, SKIP TO QUESTION C30.

C29. If case presented but declined for prosecution, what was the reason? (CIRCLE ONE RESPONSE ONLY)

Mental condition of suspect..... 1 15/

Referred to juvenile court..... 2

Referred for other prosecution..... 3

Declined for other reason (SPECIFY)_____ 4

Declined by prosecutor, no reason given..... 5

Other (EXPLAIN)_____ 6

CARD 05

EVIDENCE SUMMARY

Answer these questions to show what types of evidence were developed in the course of this investigation. Evidence types should be coded only as to their presence or absence in the file and not as to their apparent quality or credibility.
(N.B.: IN ANSWERING THESE QUESTIONS, PRESENCE/ABSENCE OF EVIDENCE TYPES SHOULD BE CODED FOR THE INVESTIGATION AS A WHOLE RATHER THAN FOR SPECIFIC SUSPECTS.)

(CIRCLE ONE RESPONSE, EACH ITEM)

PHYSICAL/DOCUMENTARY EVIDENCE

		YES	NO RECORD	
C30.	Financial/property records:			
	Ownership history	1	2	16/
	Code violations	1	2	17/
	Business condition	1	2	18/
	Tax arrearages	1	2	19/
	Other (SPECIFY)_____	1	2	20/
C31.	Insurance information:			
	Policy information	1	2	21/
	Claim information	1	2	22/
C32.	Fingerprints:			
	Person(s) suspected of setting fire	1	2	23/
	Other (SPECIFY)_____	1	2	24/
C33.	Video/audio evidence:			
	Evidence of arson-for-hire (e.g. payment, discussion of transaction, instructions to torch)	1	2	25/
	Other (SPECIFY)_____	1	2	26/

		YES	NO RECORD	
C34.	Any other physical or documentary evidence? (INDICATE Y/NR. IF YES, DESCRIBE UP TO 5 ITEMS.)	1	2	27/
	1. _____			28-29/
	2. _____			30-31/
	3. _____			32-33/
	4. _____			34-35/
	5. _____			36-37/

WITNESS/TESTIMONIAL EVIDENCE

		YES	NO RECORD	
C35.	Statements/admissions by suspect(s):			
	Commission of arson	1	2	38/
	Motive (e.g. domestic dispute, business condition) (SPECIFY)_____	1	2	39/
	Opportunity (e.g. admission of presence at scene)(SPECIFY)_____	1	2	40/
	Other (SPECIFY)_____	1	2	41/

IF NO STATEMENTS/ADMISSIONS, SKIP TO QUESTION C37. IF STATEMENTS, ANSWER QUESTION C36:

C36.	Who can testify to above statement(s)?:			
	Investigator	1	2	42/
	Other (SPECIFY)_____	1	2	43/
C37.	Suspected accomplice/torch/co-conspirator testimony as to:			
	Motive	1	2	44/
	Modus operandi	1	2	45/
	Payment/transaction	1	2	46/
	Other (SPECIFY)_____	1	2	47/
C38.	Polygraph operator; tests administered to:			
	Suspect(s)	1	2	48/
	Witnesses	1	2	49/
	Other (SPECIFY)_____	1	2	50/

Describe results:_____

_____

CARD 05

		YES	NO RECORD	
C39.	Other testimony linking suspect(s) to fire scene/commission of arson:			
	Eyewitness to suspect(s) setting fire.....	1	2	51/
	Suspect(s) seen entering/leaving scene near time of fire.....	1	2	52/
	Suspect(s) seen purchasing or in possession of accelerants.....	1	2	53/
	Suspect(s) seen threatening/quarreling with victim...	1	2	54/
	Other motive-related testimony.....	1	2	55/
	Identification of suspect(s)' vehicle.....	1	2	56/
	Other (SPECIFY)_____	1	2	57/
	Other (SPECIFY)_____	1	2	58/
C40.	Any other witnesses/testimony? (INDICATE Y/NR. IF YES, DESCRIBE UP TO 5.).....	1	2	59/
	1. _____			60-61/
	2. _____			62-63/
	3. _____			64-65/
	4. _____			66-67/
	5. _____			68-69/

		YES	NO RECORD	
C41.	Problems with evidence/witnesses?			
	Key witness(es) refuses to testify.....	1	2	70/
	Key witness(es) unavailable.....	1	2	71/
	Key witness(es) considered unreliable.....	1	2	72/
	Physical evidence lost/destroyed.....	1	2	73/
	Constitutional problem with evidence.....	1	2	74/
	Break in chain of custody.....	1	2	75/
	Faulty scene examination.....	1	2	76/
	Other (SPECIFY)_____	1	2	77/
	_____			

BEGIN CARD 06
1-6/dup
7-8/06

C42. List the three most important reasons that this case did not result in prosecution:

1. _____ 9-10/
2. _____ 11-12/
3. _____ 13-14/

C43. Briefly summarize this case.

_____

_____

_____

_____

Major Coding Problems

Coded by:_____
Date Begun:_____
Date Completed:_____
Reviewed by:_____

ARSON ADJUDICATION STUDY

Case Record Data Collection

DEFENDANT SUPPLEMENT

BEGIN CARD 07

If case accepted for prosecution, complete one form for each defendant listed in any charging document. Do not use this form for cases that result in no prosecution.

AAI Record Number: ☐ SITE ☐ SAMPLE ☐☐☐ CASE ☐ DEFENDANT # 1-6/ 7-8/07

Total number of defendants listed in any charging document: ☐☐ 9-10/

D1. This defendant's age at last birthday: ☐☐ 11-12/

D2. Relationship of this defendant to victim or property burned: (CIRCLE ALL THAT APPLY)

	YES	NO	
Owner	1	2	13/
Tenant/Resident	1	2	14/
Family member	1	2	15/
Acquaintance/neighbor of owner	1	2	16/
Acquaintance/neighbor of tenant	1	2	17/
Alleged "torch" hired by owner	1	2	18/
Other relationship (SPECIFY)_____	1	2	19/
No relationship (N.B.: IF "1"IS CIRCLED HERE, ALL OTHER RELATIONSHIP CHOICES SHOULD BE CODED "2")	1	2	20/

CARD 07

EVIDENCE SUMMARY ANSWER THESE QUESTIONS TO SHOW WHAT TYPES OF EVIDENCE WERE DEVELOPED FOR PROSECUTION OF THIS DEFENDANT. EVIDENCE TYPES SHOULD BE CODED ONLY AS TO THEIR PRESENCE OR ABSENCE IN THE FILE AND NOT AS TO THEIR APPARENT QUALITY OR CREDIBILITY.

BE CAREFUL TO ASSOCIATE EVIDENCE TYPES WITH THIS PARTICULAR DEFENDANT. IF A CATEGORY OF EVIDENCE IS PRESENT BUT DOES NOT APPLY SPECIFICALLY TO THIS DEFENDANT, CODE "NR." (E.g., AN ARSON-FOR-PROFIT CASE WITH PROPERTY AND BUSINESS RECORDS INVOLVED IN EVIDENCE AGAINST PROPERTY OWNER. THESE CATEGORIES OF EVIDENCE SHOULD BE CODED "NR" ON THE DEFENDANT SUPPLEMENT FOR AN ALLEGED TORCH, BUT PRESENT ON THE FORM FOR THE OWNER.) IF THERE IS ONLY ONE DEFENDANT, ALL EVIDENCE TYPES SHOULD BE CODED FOR THAT DEFENDANT.

(CIRCLE ONE RESPONSE FOR EVERY ITEM)

PHYSICAL/DOCUMENTARY EVIDENCE

	YES	NO RECORD	
D3. Financial/property records applicable to this defendant:			
Ownership history	1	2	21/
Code violations	1	2	22/
Business condition	1	2	23/
Tax arrearages	1	2	24/
Other (SPECIFY)_____	1	2	25/
D4. Insurance information on this defendant:			
Policy information	1	2	26/
Claim information	1	2	27/
D5. Fingerprints:			
This defendant	1	2	28/
Other (SPECIFY)_____	1	2	29/
D6. Video/audio evidence:			
Evidence of arson-for-hire (e.g. payment, discussion of transaction, instructions to torch	1	2	30/
Other (SPECIFY)_____	1	2	31/

CARD 07

	YES	NO RECORD	
D7. Any other physical or documentary evidence? (INDICATE Y/NR. IF YES, DESCRIBE UP TO 5 ITEMS.).....	1	2	32/
1. _____			33-34/
2. _____			35-36/
3. _____			37-38/
4. _____			39-40/
5. _____			41-42/

WITNESSES/TESTIMONIAL EVIDENCE

D8. Statements/admissions by this defendant:			
Commission of arson.....	1	2	43/
Motive (e.g. domestic dispute, business condition).....	1	2	44/
(SPECIFY)_____			
Opportunity (e.g. admission of presence at scene)(SPECIFY)_____	1	2	45/
Other (SPECIFY)_____	1	2	46/

IF NO STATEMENTS/ADMISSIONS, SKIP TO QUESTION D10. IF STATEMENTS, ANSWER QUESTION D9:

D9. Who can testify to above statements?			
Investigator.....	1	2	47/
Other (SPECIFY)_____	1	2	48/
D10. Alleged accomplice/torch/co-conspirator testimony as to:			
Motive.....	1	2	49/
Modus operandi.....	1	2	50/
Payment/transaction.....	1	2	51/
Other (SPECIFY)_____	1	2	52/
D11. Polygraph operator; tests administered to:			
This defendant.....	1	2	53/
Witnesses.....	1	2	54/
Other (SPECIFY)_____	1	2	55/

Describe results:_____

_____ _____

CARD 07

	YES	NO RECORD	
D12. Other testimony linking defendant(s) to fire scene/commission of arson:			
Eyewitness to this defendant setting fire.....	1	2	56/
This defendant seen entering/leaving scene near time of fire.....	1	2	57/
This defendant seen purchasing/in possession of accelerants.....	1	2	58/
This defendant seen threatening/quarreling with victim.....	1	2	59/
Other motive-related testimony.....	1	2	60/
Identification of this defendant's vehicle.....	1	2	61/
Other (SPECIFY)_____	1	2	62/
Other (SPECIFY)_____	1	2	63/
D13. Any other witnesses/testimony as to this defendant? (INDICATE Y/NR. IF YES, DESCRIBE UP TO 5.).....	1	2	64/
1. _____			65-66/
2. _____			67-68/
3. _____			69-70/
4. _____			71-72/
5. _____			73-74/

BEGIN CARD 08

	YES	NO RECORD	1-6/dup 7-8/08
D14. Problems with evidence/witnesses against this defendant?			
Key witness(es) refuses to testify.....	1	2	9/
Key witness(es) unavailable.....	1	2	10/
Key witness(es) considered unreliable.....	1	2	11/
Physical evidence lost/destroyed.....	1	2	12/
Constitutional problem with evidence.....	1	2	13/
Break in chain of custody.....	1	2	14/
Evidence ruled inadmissible by court.....	1	2	15/
Faulty scene examination.....	1	2	16/
Other (SPECIFY)_____	1	2	17/

_____

_____

CARD 08

DEFENSE CASE

	YES	NO RECORD	
D15. Alibi witness for this defendant.....	1	2	18/
(EXPLAIN)_____			
_____			
_____			
D16. Expert testimony:			
Alternative explanation of cause and origin.....	1	2	19/
Other (SPECIFY)_____	1	2	20/
D17. Mental examination for this defendant.....	1	2	21/
(EXPLAIN)_____			
_____			
_____			
D18. Physical evidence (INDICATE Y/NR. IF YES, DESCRIBE UP TO 3 ITEMS).....	1	2	22/
1. _____	☐☐		23-24/
2. _____	☐☐		25-26/
3. _____	☐☐		27-28/

	YES	NO RECORD	
D19. Other defense witnesses/testimony (INDICATE Y/NR. IF YES, DESCRIBE UP TO 3 ITEMS).....	1	2	29/
1. _____	☐☐		30-31/
2. _____	☐☐		32-33/
3. _____	☐☐		34-35/

D20. Date of warrant (other than for failure-to-appear), arrest, indictment or information--WHICHEVER CAME FIRST--for this defendant:

☐☐ ☐☐ ☐☐ 36-41/

MONTH DAY YEAR

D21. Was this defendant first apprehended in connection with these charges: (CIRCLE ONE ONLY)

At the scene of the fire/one of the fires involved in this case?.....	1	42/
Not at the scene but within 24 hours of one of the fires involved in this case?.....	2	
24 hours or more after the most recent fire involved in the case?.....	3	
This defendant not arrested.....	4	
Other or combinations (SPECIFY)_____	5	

_____

_____

_____

D22. Were any charges against this defendant changed (reduced, added or dropped) from investigative submission to the original charging document?

1 Yes 2 No 8 Unknown/can't tell 43/

IF YES, SPECIFY: _____

_____

CARD 08 CONTINUES WITH Q.D24

D23. Complete the following table showing the offenses this defendant was charged with at each of the designated stages. For information on original and final charging documents, see general instructions. Use one line for each specific offense.

<---------- OFFENSES ---------->			<---------- NUMBER OF COUNTS ---------->	
Description (e.g. Arson 1°)	Statute Cit. (for arson charges only)	Felony/Misd.	Original Charging Document	Final Charging Document (if dismissed pre-indictment, enter "0")	Conviction (if acquitted of all charges, enter "0")
		1 2			
		1 2			
		1 2			
		1 2			
		1 2			
		1 2			
		1 2			
		1 2			
		1 2			
		1 2			
		1 2			
		1 2			
		1 2			
		1 2			
		1 2			
		1 2			
		1 2			

CARD 08

D24. How was the case against this defendant disposed? (CIRCLE ONLY ONE)

Bench trial	1	44/
Jury trial	2	
Preliminary Hearing/Grand Jury	3	
Plea	4	
Dismissal	5	
Other (SPECIFY)_____	6	

D25. What was the disposition? (CIRCLE ONLY ONE)

Guilty-all charges in original charging document	1	45/
Not guilty-all charges in final charging document (no insanity)	2	
Not guilty-all charges in final charging document--insanity	3	
All charges dismissed by court	4	
All charges nolled/dismissed by prosecutor	5	
No probable cause/no bill	6	
Other outcome involving conviction (SEE Q. D23; CHARGES ON CONVICTION)	7	
Other (e.g., fugitive-outstanding warrant, mental incompetency)	8	

D26. Was this defendant convicted on any charge of arson?

1 Yes 2 No 46/

IF YES, ANSWER QUESTION D27.

IF NO, SKIP TO QUESTION D28.

D27. Specify which fire(s) this conviction stemmed from (using fire #'s in case level form):

	Yes	No	
Fire 1	1	2	47/
Fire 2	1	2	48/
Fire 3	1	2	49/
Fire 4	1	2	50/
Fire 5	1	2	51/
Other fire(s)	1	2	52/

CARD 08

D28. Is there evidence of plea negotiations as to this defendant?

1 Yes (EXPLAIN) 2 No 53/

_____

_____

_____

_____

D29. Date of final disposition for this defendant, not including sentence or appeal.

MONTH	DAY	YEAR

54-59/

D30. What was the sentence imposed? (COMPLETE ALL THAT APPLY, IN MONTHS. ZERO-FILL OTHERS)

Jail/prison: total term ___ 60-62/

suspended time ___ 63-65/

Probation: total time ___ 66-68/

Other: _____ 69-70/

_____

_____

D31. List the three most important reasons for outcome as to this defendant (e.g., types of evidence present; types of evidence missing; elements of defense case, etc.). If outcome mixed, give reasons for each element.

a. _____ 71-72/

_____

b. _____ 73-74/

_____

c. _____ 75-76/

_____

D32. Briefly summarize this case.

_____

_____

_____

_____

APPENDIX B

Processing of Juvenile Arson Cases

It is often suggested that juveniles commit a significant portion of the arsons in the United States. The data collected for the present study suggest that almost one-fourth of cases resulting in apprehension of a suspect or presentation of a matter to the prosecutor involved juveniles.[1]

National estimates of juvenile involvement in arson are somewhat higher. They suggest that roughly two out of five persons arrested for arson are under the age of 18. An LEAA survey found that 43 percent of all arson arrestees were in the 13-19 year age range.[2] Uniform Crime Reports (UCR) figures for 1981 indicated that 43 percent of arson arrestees were under 18 and 26 percent were under 15.[3] This places arson very close to such property offenses as burglary and motor vehicle theft, as measured by the proportion of juveniles involved (43 percent and 41 percent of the arrestees for those crimes, respectively, were under 18). With no other major crime is the proportion of arrestees under 15 so large.

However, UCR data suggest a downward trend in the juvenile component of arson. Figures for 1968 revealed that 66 percent of arson arrests were of juveniles (persons under 18 years of age). The percentage has declined by one-third since then, as shown in Table B.1. These figures could indicate a real shift in the population of arsonists from one composed predominantly of juveniles to one composed predominantly of adults. (Of course, since the absolute number of arsons has increased over this period, the problem of juvenile arson continues to be very serious.) However, the figures could also reflect a relative increase over this period in the investigative attention

---

[1] In our random sample of 400 investigations, six cases were handled through juvenile counseling and six cases were referred for juvenile prosecution. On the other hand, 37 cases were presented for adult prosecution. The juvenile cases thus comprise 12 of 49 cases or 24 percent.

[2] Anthony Rider, "The Firesetter: A Psychological Profile," FBI Law Enforcement Bulletin (June 1980), p. 8.

[3] FBI, Crime in the United States - 1981, p. 169. In general, the UCR figures are only a rough measure of juvenile involvement in arson. Since many juveniles are warned but not arrested, the figures may underestimate their involvement in minor arsons. On the other hand, youth may be less adept at "covering their tracks," and therefore more readily arrested in some kinds of arson than are adults.

Table B.1

Juvenile Arson Arrest Trends

Years	Percent of Persons Arrested for Arson Who are Under 18 Years of Age
1968	66%
1972	58
1977	50
1980	44
1981	43

SOURCES: 1968 figures cited in Charles P. Smith, "A Preliminary Assessment of Arson and the Juvenile Justice System," (National Juvenile Justice System Assessment Center, 1979), p. 2. Figures for other years from FBI, Crime in the United States - 1981, pp. 165, 167, 169.

paid to forms of arson committed largely by adults.

In any case, it is clear that many arsonists are under 18. Some of them are handled within the adjudicatory system discussed in this report. As we shall see, many youth between 16 and 18, particularly those who commit serious crimes, are processed as adults. But because there are differences among jurisdictions in the way the cases of juveniles in various age ranges are handled and because connections exist between juvenile and adult arson activities, it is important to understand the elements of juvenile case processing. Accordingly, we discuss in this appendix the systems developed by the sites under study to process juvenile offenses in general and juvenile arson in particular.

B.1 The Nature of Juvenile Arson

Vandalism and, to a much lesser extent, pyromania are traditionally considered the arson types particularly characteristic of juveniles. Juvenile vandalism arsonists most often target vacant buildings, school property, trash containers in or near buildings, and automobiles. Their motive is anger or frustration, but the fires may often become much larger than intended. Two other "motives" are thought to prompt youths under 18 to set fires. There are, of course, accidents that result from playing with matches, experimenting with fire, or simply accepting a dare. There are also the cases in which young people are recruited by adults to torch buildings on which the adults wish to collect insurance. The expectation is that, even if they are apprehended, youths will be processed through the juvenile justice system and therefore treated more leniently than an adult would be.

Actually, many jurisdictions make provision for processing some cases of youthful arsonists through the adult courts, but there is considerable variation in the age range and offense types for which this is permissible. In the following section, we examine the ways in which the juvenile justice systems in our four study sites interact with the adult courts in the adjudication of juvenile arson.

B.2 Overview of Juvenile Justice Systems in the Four Study Sites

The juvenile justice systems in the four study sites have a number of features in common (see Table B.2). Their differences arise in the specific indications for determining whether a youth should be prosecuted as an adult or dealt with by the juvenile system. Until the late 1960s, family or juvenile courts tended to avoid an adversarial process based on sharply differentiated roles for defense, prosecution, judge, and jury. The aim was seen as treatment more than punishment; consequently, the youth's interests were thought to be paramount for all the actors in the system. Under this system, the need for due process safeguards that characterize the adult criminal justice system was downplayed in juvenile proceedings. However, since the Supreme Court's decision In Re Gault,[1] juvenile proceedings have been more like adult cases and their adversarial character has increased dramatically.

Ordinarily, the juvenile justice systems in our study jurisdictions observe four gradations in the processing of youthful offenders:

- Police may "lecture" the youth and release them without ever booking them. In some jurisdictions the practice is for police to check with the district attorney's office before deciding to lecture and release. In others, lecture and release is not an official police option.
- Before an adjudication of delinquency is made, there is an opportunity for a juvenile to be diverted informally from the court system through counseling, education, or other programs. These programs take a variety of forms depending on the jurisdiction, and they are more or less formal, but depending on the seriousness of the alleged offense they may be used in preference to a commitment after adjudication.
- If the youth is not diverted earlier, he can be prosecuted in the juvenile court system and adjudicated a juvenile delinquent. Disposition options include counseling, supervised probation, and confinement in a facility operated by the state youth authority.
- It is recognized that for more serious crimes, especially those involving harm or threats of harm to life and limb by youth above a certain age, more serious treatment is necessary. In each jurisdiction we studied, it is possible to bind a juvenile over to adult court for prosecution according to the rules of

[1] 387 U.S. 1 (1967); the due process model was more firmly established in juvenile proceedings by In Re Winship, 397 U.S. 359 (1970).

Table B.2
COMPARATIVE JUVENILE CASE PROCESSING IN FOUR SITES

	Cleveland	Bronx	San Diego	Denver
Age for Processing by Juvenile Court	7-15	7-15	7-17	10-17
Treatment by Juvenile Court	Intake worker evaluates. Can divert, especially if status offense. Hearing held; full arraignment process to be instituted. Can bind over to adult court if over 16.	Hearing in Family Court. Judge can sentence to juv. facility. But designated felonies in Family Court are prosecuted as quasi-criminal proceedings.	DA screens and decides whether offense warrants prosecution in adult court. Juvenile court hearing mirrors adult trial.	Can lecture and release, defer prosecution, or divert. DA screens and decides. If youth is over 14 and offense is serious, can bind over to adult court. Otherwise jury trial in juvenile court.
Juvenile Court Dispositional Choices Involving Confinement	Commitment to state or private institution, but private institutions (which are better) will not accept arson offenders.	Commitment to Div. of Youth facility; in general, sentence there is lower than would be served by an adult arsonist.	Commitment to Calif. Youth Authority, but other dispositions possible and preferred, including probation through adult court.	Commitment to juvenile detention facility.
Age for Processing by Adult Court	16+	16+ or 14+	18+ or 16+	18+ or 14+
Types of Offenses/ Degree of Discretion	Felonies; optional bindover for youth 16-18.	"Designated felonies": specified violent offenses incl. arson 1° & 2° require youth 14+ to be processed as adults.	Very serious offenses--"707B1"--give DA the option to bind over youth 16-17 to adult court.	Youth 14+ accused of violent crimes or with previous record can be bound over after preliminary hearing. (Extremely rare in arson cases.)
Typical Outcome in Adult Court	Sentencing more lenient than with adults.	Lower sentences; wider options if classed as "youthful offender."	Sentence intended to combine rehab. and punishment.	Rarity of cases makes characterization difficult.
Typical Sentences in Adult Court	Short terms or probation.	Serves sentence in juvenile facility until past 16.	Adult prison with lighter sentence considered better than CYA.	Rarity of cases makes characterization difficult.

criminal procedure. Various mitigating exceptions prevent such youth from being treated exactly as an adult defendant would be treated, but in general the treatment is more severe than in the juvenile or family court.

In Cleveland and the Bronx, youth under the age of 16 are ordinarily processed through the juvenile courts, although there are important exceptions in the Bronx, as discussed below. In Denver and San Diego, those under 18 are handled in juvenile court. The common exceptions are youths accused of violent crimes or with prior records; in such cases, youths 14 years old or older (in the Bronx and Denver) or 16 or older (in Cleveland and San Diego) may be prosecuted as adults. In the Bronx, those over 16 are considered adults and must be prosecuted through the criminal court, though special provisions are made for those designated "youthful offenders."

In the adult courts the procedure is of course adversarial and the usual due process protections apply. Those sentenced on arson charges through the criminal courts often face prison terms, though if they are under 18 years of age these terms (at least while they are under 18) may be served in a youth facility. In general, prison sentences for young offenders are lighter than an adult offender would receive for the same offense. In some jurisdictions, such as San Diego, there appears to be more flexibility in the adult system than in the juvenile, at least for those under 18, so where possible youth who qualify in terms of age and offense are bound over and thus avoid commitment to the youth facility.

These processing and outcome options apply in the relatively clear-cut arson cases where juveniles are involved in firesetting acts without the participation of adults. An additional set of problems is posed when a juvenile is involved, often as a hired torch, in an adult arson case. In such instances, the case against the adult is usually considered more significant than that against the youth. The question is how best to use the case against the youth in the adult prosecution. Usually the adult is not prosecuted in juvenile court for contributing to the delinquency of a minor, though in some jurisdictions this would be an option. The preferred approach is to offer the juvenile a reduced charge in return for his testimony in the adult case. This can be an especially important strategy in cases where no other prosecution testimony is available. Virtually all states protect adult

defendants from conviction on the uncorroborated testimony of a co-conspirator. However, at least in some jurisdictions (e.g., Ohio), the courts have not considered juveniles to fall under the rubric of co-conspirators. If they are not legally competent to enter into an implied contract with an adult to commit a crime, they are not liable to a presumed conflict of interest in giving testimony; thus, their testimony can be accepted by a court and, even when uncorroborated, used by a jury as a basis for conviction. That being the case, it is clearly in the interest of the prosecutor's office to develop liaisons with the juvenile court in cases of this sort and to secure testimony from juvenile arsonists where necessary in the prosecution of adult cases. As we note below, however, not all jurisdictions have developed smooth working relationships between prosecutors in the adult and juvenile court systems.

B.3 A Case Study: The New York Juvenile Justice System

To illustrate more clearly the complex relationships that can exist between the juvenile and adult criminal court systems, we present in this section a detailed description of the New York juvenile justice system as it operates in the Bronx, with special reference to arson prosecution. It should be borne in mind that many details of this system are peculiar to New York--in particular, the provisions enacted within the past five years making it possible to institute criminal or quasi-criminal proceedings against young people 14 years of age and older. Nevertheless, in a general way, this system indicates the nature of the interconnections that exist between the juvenile and the adult court systems. It thus provides a useful background for a discussion of the effectiveness of such systems and the problems associated with them.

For convenience of discussion, young people served by the New York juvenile justice system should be considered in three age groups: ages 7 through 12 (those under 7 are considered incapable of committing an offense); ages 13 through 15; and ages 16 and over. Those in the first group are processed through the Family Court (if they are processed at all; a certain amount of discretion is available to police). Those in the last group are processed through the adult criminal courts. Those in the middle group may be processed through either the Family Court or the adult criminal courts.

We describe these two separate processes in turn, as they pertain to arson offenses, then turn to the problematic middle group.

B.3.1 Family Court

A youngster may be brought to Family Court on a petition which alleges that he is in need of treatment, supervision, or confinement because he has committed a recognized offense and is of appropriate age. The Corporation Counsel for the City of New York presents the case against the juvenile, though the adversarial line is often blurred. At intake, and before the hearing takes place, the Probation Department can "adjust" the case (i.e., provide counseling or mediation and terminate it without filing a petition) pursuant to Section 734 of the Family Court Act. At the fact-finding hearing the youth may "admit" or "deny" the charges. If he denies them, the hearing proceeds to consider evidence and witness testimony and may conclude that the allegations of the petition are established.

By the time of the dispositional hearing, a diagnostic workup is done; on the basis of such a workup, it is possible that, in spite of a "guilty" finding, the youngster will be judged not in need of treatment, supervision, or confinement. If this happens (as it rarely does), the entire case can be dismissed;[1] otherwise the judge makes an appropriate disposition to a juvenile facility or probation officer.

B.3.2 Criminal Court

A youngster 16 or over has reached the age of responsibility and cannot be prosecuted for an offense through Family Court. The criminal adjudication procedure involves arraignment in lower court, the setting of bail and consequent release if bail is met, indictment by grand jury, plea bargaining under some circumstances, and trial in others. For certain classes of offense, arraignment is in Supreme Court (the court of general trial jurisdiction). If the youth is found guilty and is held to be criminally responsible, he is sentenced as an adult. An exception in the case of sentencing is made for those designated "youthful offenders". These are discussed below.

[1] Family Court Act, Section 750.

B.3.3. Juveniles 13-15 years of age

The Juvenile Justice Reform Act of 1976 focused on youths 13, 14, and 15 years of age. Where previously they had undergone the quasi-civil procedures of the Family Court, they were now subjected to quasi-criminal procedures in the same court, and in addition, for certain classes of offense, they could be prosecuted through the adult criminal courts.

The 1976 legislation assigned assistant district attorneys to the Family Court to prosecute cases in which a "designated felony act" was alleged. Under the law,[1] two kinds of "designated felony acts" are recognized. Class A acts include murder (1° and 2°), kidnapping 1°, and arson 1°. Non-class A acts include first degree assault, manslaughter, rape, sodomy, and robbery, second degree arson and kidnapping (the latter where deadly force is used or threatened), attempted kidnapping 1°, and attempted murder 1° and 2°. In addition, by the Reform Amendment of 1978, third felony offenses committed by juveniles of any age (7 and over) are classed as designated felonies subject to quasi-criminal proceedings in Family Court. Second degree robbery and assault were also made designated felonies if committed by a 14- or 15-year-old youth who had previously committed a designated felony. The district attorney's office in the Family Court (known as the Juvenile Offense Bureau) has the power (and considerable latitude) to screen cases and determine whether or not to charge a youth with a designated felony. Even if a case is later reclassified from a designated felony to a lesser charge, the Juvenile Offense Bureau retains jurisdiction. In all designated felony cases the hearing closely resembles a criminal trial and is governed by the same evidentiary principles and standards of proof.

Under Chapter 481, passed as a supplement to the Juvenile Justice Reform Amendment of 1978, the notion of criminal responsibility was introduced for youngsters in this age range. The chapter provides that youngsters 13 and over are to be considered criminally responsible for the crime of murder, and 14- and 15-year-olds considered criminally responsible for some of the other violent offenses listed as "designated felonies." This means that, since the Family Court has no jurisdiction over crimes as such, the youth so charged must be prosecuted in adult criminal court. Youngsters in this age

[1] F.C.A. Section 712(h)(i).

range, so prosecuted, are known as "juvenile offenders" and are distinguished from "juvenile delinquents" who are prosecuted in Family Court. Thus, for example, if 14- and 15-year-olds are charged with first or second degree arson, they will be designated "juvenile offenders" and prosecuted through the adult courts. Those facing lesser arson charges and prosecuted through Family Court will frequently negotiate a plea ("admission") to criminal mischief rather than arson, since better placements are available to youth convicted on this charge.

During the criminal proceedings, there are numerous occasions when a juvenile offender may be reclassified as a juvenile delinquent and prosecuted through Family Court. For example, at the pre-indictment stage, the defense attorney may appear before the Supreme Court to request remand to Family Court as a juvenile delinquent. If this request is denied, it cannot be reopened. Again, if the grand jury fails to return an indictment on criminal charges at the degree for which criminal responsibility is assessed, but does return an indictment on a lesser charge, it must vote to remove the juvenile from the criminal courts; this is a matter of law, not of grand jury discretion. Again, at arraignment, a juvenile can plead to a lesser offense for which, by law, he could not be held criminally responsible. If this plea is accepted, the effect is to reclassify him as a juvenile delinquent and remand his case to Family Court. Finally, if the case goes to trial in the adult criminal court and the defendant is found guilty on a lesser charge, one that does not carry the designation of criminal responsibility, then he is sent back to Family Court for adjudication. Even if he is convicted of a crime for which he is by law criminally responsible, a motion can be made to set the verdict aside. However, the prosecutor must consent, and this is almost never done.

A convicted juvenile offender receives a somewhat lighter sentence than an adult, and while he remains under 16 he will serve his sentence in a special juvenile offender facility operated by the Division of Youth rather than an adult facility of the Department of Correctional Services.

In addition to the other categories mentioned, there is the category of "youthful offender" which overlaps the "juvenile offender" category but is not coextensive with it. "Youthful offender" is a discretionary status applicable to youth between 14 and 19 years of age. It is determined after

conviction. Its effect is to exempt the youth in question from a mandatory prison sentence. Class A felons cannot be designated youthful offenders.

A juvenile offender who was convicted of first degree arson and was not designated a youthful offender would receive a life sentence. He would therefore have to serve at least five to seven years, the first one or two years in a Division of Youth facility, before he could be released. By comparison, an adult offender convicted of the same charge would serve a minimum of 15 years. A youthful offender would face a broader range of sentence options, including, in some cases, probation.

B.4 Relation between Juvenile and Adult Arson Adjudication

Like adult arson prosecutions, those involving juveniles--in all jurisdictions--have the fundamental aim of reducing the incidence of arson. Apart from deterring or incapacitating youth who have a propensity to set fires, juvenile arson case processing might be expected to affect adult arson rates by rehabilitating some youthful arsonists before they become adults and by using the testimony of juveniles hired as torches to convict the adults involved. Not surprisingly, the present study has given us no information about the success of rehabilitative programs for juveniles. However, the recent passage of legislation like that of New York, making it possible to prosecute relatively young teenagers as adults for serious crimes, gives some grounds for inferring that the potential of rehabilitation is seen as limited and that as a result preventive or deterrent efforts are designed to include a threat of more severe punishment than the juvenile justice system provides by itself.

Respondents in the prosecutors' offices in the study sites indicated that, while there has been some success in using juvenile torches to convict adults accused of arson-for-profit, a number of impediments can arise. Prosecution in juvenile courts is ordinarily handled by specially designated prosecutors who are not active in adult courts at the same time. Their success in coordinating a juvenile case with an adult case depends on the amount and quality of communication between the prosecutors in the juvenile and adult courts. At times the person handling a juvenile case simply fails to inform the prosecutor handling the case of the involved adult. At other times, coordination fails for even more mundane reasons. The Cleveland

juvenile court has no court stenographers to take down testimony or confessions. Instead, cassette tape recorders are used. But the county prosecutor's office has no facilities for transcribing tapes. As a result, the prosecutors tend to pursue other avenues for gaining convictions and ignore the testimony of juvenile torches.

It is reasonable to conclude that juvenile arson is seen by prosecutors as a problem requiring somewhat different methods from adult arson--in particular, a sensitivity to the youth's degree of sophistication and understanding of the implications of his actions. Most prosecutors interviewed appeared to have the interests of the youth uppermost in mind, and only secondarily the likelihood that a given juvenile case could be helpful in a proceeding against an adult arsonist. The considerable flexibility and discretion built into the juvenile justice systems studied are symbolic of their primary emphasis on the welfare of the youth, whenever that welfare can be protected without undue threats to public safety.

APPENDIX C

Fire Report Format Developed
by Metro Arson Strike Team
(City of San Diego)

FIRE REPORT FORMAT

I. Summary

II. Introduction

a. Investigators responding and arrival time
b. How requested
c. By whom
d. Reason requested
e. Conditions upon arrival (i.e., fire fighting operations)
f. Weather

III. Structure

a. Construction type
b. Size
c. Occupancy
d. Fire protection system and condition
e. Building security as found by firefighters (who)

IV. Narrative

a. Exterior examination (where fire vented)
b. Interior examination (work backwards to area of origin)
c. Point of origin
d. Fire spread from point of origin, identify fuel and ignition source
e. Resultant damage (structure and contents)
f. Evaluation ALL accidental fire causes in area of origin
g. Code violations (pertinent to fire cause and/or fire spread)

V. Conclusion

VI. Evidence

a. Location discovered
b. Discovered by/witness of discovery
c. Identify, mark and collect
d. Disposition

VII. Damage Estimate

a. Structure
b. Contents

VIII. Insurance

a. Structure
b. Contents
c. Company
d. Recent changes
e. Beneficiary
f. Previous fires

IX. Death or Injuries

X. Witness or suspect interviews (separate 153's)

END