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P. C. Giannelli,[1] *J.D., M.S., Captain, JAGC, USA*

Legal Aspects of Obtaining Evidence for Analysis by Forensic Techniques

Through the examination of trace evidence, many forensic techniques can establish a link between a suspect and the scene of a crime. Blood, saliva, semen, hairs, fibers, soils, glass, and fingerprints have all been used in this manner. In addition, handwriting and voice exemplars, bite marks, and gunshot residues have also been employed to provide a nexus between a suspect and a crime. All these methods require some form of cooperation on the part of the suspect, ranging from his passive presence for fingerprinting and extraction of blood to his more active participation in providing voice and handwriting exemplars. This contact between the investigator and the suspect has generated constitutional litigation. Defendants have argued that submission to these techniques: (1) violated the privilege against self-incrimination under the Fifth Amendment, (2) violated the right to counsel under the Sixth Amendment, (3) infringed upon the right to be free of unreasonable searches and seizures under the Fourth Amendment, and (4) deprived them of due process of law. This paper will examine the judicial response to these constitutional challenges and the impact these decisions will have on the forensic sciences.

The Privilege Against Self-Incrimination

The leading case on the applicability of the privilege against self-incrimination to the collection of physical evidence is *Schmerber v. California* [*1*]. While being treated at a Los Angeles hospital for injuries sustained in an automobile collision, Schmerber was arrested for driving under the influence of alcohol. Blood samples were subsequently obtained from Schmerber by a physician at the direction of the investigating police officer. Although the defendant—on his attorney's advice—objected to this procedure, blood was extracted and analyzed for alcoholic content. On appeal to the U.S. Supreme Court, the defendant argued that his privilege against self-incrimination had been violated by the introduction of the results of the blood test at his trial. In resolving this issue the Court drew a line between "communicative or testimonial" evidence and "physical or real" evidence. The Fifth Amendment, according to the Court's interpretation, prohibits only compulsion to extort testimonial communications from a suspect. While acknowledging that compulsion was involved when a defendant was required to furnish

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[1] Fellow, Armed Forces Institute of Pathology-George Washington University Masters Degree Program in Forensic Science, Legal Medicine Section, Armed Forces Institute of Pathology, Washington, D.C. 20306.

physical evidence such as fingerprints, photographs, measurements, and blood samples, the Court ruled that such evidence is not constitutionally protected by the self-incrimination clause. The purpose of the privilege, explained the Court, was to require the government in criminal prosecutions to produce evidence against the defendant "by its own independent labors, rather than by the cruel, simple expedient of compelling it from his own mouth" [2]. This function of the privilege would not be defeated by the use of physical characteristics that do not have any verbal content. As precedent the Court cited Justice Holmes's opinion in *Holt v. United States* [3], in which the compelling of a defendant to model a blouse found at the scene of a crime was held to be outside the scope of the Fifth Amendment.

The *Schmerber* reasoning was subsequently reaffirmed in cases involving lineups and handwriting exemplars. In *United States v. Wade* [4], the Court stated that compelling an accused to exhibit his person for observation was compulsion "to exhibit his physical characteristics, not compulsion to disclose any knowledge he might have" [5]. In *Gilbert v. California* [6] the Court concluded that a "mere handwriting exemplar, in contrast to the content of what is written, like the voice or body itself, is an identifying physical characteristic outside [the Fifth Amendment's] protection" [7]. In 1973 the Court in *United States v. Dionisio* [8] again applied the *Schmerber* rationale in ruling that the use of tape recordings of a defendant's voice for the purpose of voiceprint analysis did not violate the Fifth Amendment because the "voice recordings were to be used solely to measure the physical properties of the witnesses' voices, not for the testimonial or communicative content of what was to be said" [9].

Virtually all forensic techniques, with the possible exception of the polygraph [10], are free from Fifth Amendment problems because they involve physical characteristics and not testimonial evidence. This position, however, has not been accepted by all courts. In *United States v. Green* [11] a Federal District Court refused to order a defendant in a fraudulent-claim case to submit handwriting exemplars of the exact signatures that had been used in the commission of the crime. The court held that requiring the defendant to provide exemplars in a situation in which the corpus of the alleged crime required proof of unlawful signature infringed upon the "spirit" of the self-incrimination clause [12]. This case appears to be inconsistent with the Supreme Court's decisions. Analysis of handwriting by an expert will be essentially the same whether the letters compared are taken from different or the same words; it involves a comparison of the physical characteristics of the individual letters. Exemplars containing the exact words as those appearing on the questioned writing only facilitate the comparison [13]. The court's reasoning in *Green* is that, given the certitude of handwriting analysis, requiring the defendant to write the signatures in question comes too close to requiring the defendant to state whether he wrote the signatures. There is no doubt that what the government sought to compel in *Green* could be incriminating, but that is not the constitutional test announced in *Schmerber* and *Gilbert*. It is no more incriminating than requiring a defendant in a murder case to provide fingerprints for comparison with prints found on the murder weapon. While both situations involve compulsion to perform potentially incriminatory acts and the results are "communicative" in the sense that all evidence is communicative, neither presents the verbal or testimonial content associated with compelling a defendant to provide evidence of guilt "from his own mouth."

State law may afford a defendant greater self-incrimination protection than Federal law. For example, in *Creamer v. State* [14], the Georgia Supreme Court was confronted with the issue of whether compelling a defendant to submit to the surgical removal of a bullet that the State wanted for firearms identification violated the self-incrimination

clause of the Georgia Constitution. While the Federal self-incrimination clause has been limited to testimonial compulsion, the Georgia clause protects an accused from being compelled to produce any evidence, whether oral or real. Under Georgia law the critical line is drawn between requiring a suspect to perform some act and requiring him passively to submit while evidence is produced from him, and only the former category is protected. Hence, fingerprinting, photographing, or staging a lineup is permissible because such procedures do not require the defendant to perform any act. On the other hand, requiring a defendant to place a foot in a cast would be prohibited because he is compelled to do an act against his will. In *Creamer* the Georgia Supreme Court held that since the surgeon and not the defendant would remove the bullet, the operation did not violate the Georgia Constitution. Apparently, under the Georgia rule a suspect could not be required to provide handwriting exemplars or model a shirt.

Right to Counsel

The Sixth Amendment guarantees that in "all criminal prosecutions, the accused shall enjoy the right . . . to have the Assistance of Counsel for his defense." The right to counsel has not been limited to the trial stage but has been held to be applicable to other formal criminal proceedings such as the preliminary hearing and arraignment [*15*]. Moreover, in certain instances the presence of an attorney has been required during the police investigation of a crime.

The right to counsel does not attach in situations in which physical evidence is obtained from suspects for comparison by forensic techniques, for two reasons. The first is found in the Supreme Court's opinion in *Kirby v. Illinois* [*16*], decided in 1972. In that case the defendant argued that the right to counsel, as applied to postindictment lineups by *United States v. Wade*, should be extended to preindictment lineups. The Court rejected this contention, holding that the right to counsel provided by the Sixth Amendment attaches only after the "initiation of adversary judicial criminal proceedings—whether by way of formal charge, preliminary hearing, indictment, information, or arraignment" [*17*]. Forensic techniques are most frequently employed in an effort to develop a suspect, satisfy the requirement of probable cause, or perfect a case; that is, prior to the commencement of formal criminal proceedings. In such circumstances, counsel would not be required under the *Kirby* decision.

The second factor that militates against the applicability of the right to counsel—still important to the postindictment situation—involves the nature of forensic techniques. There have been only two instances in which the presence of an attorney has been considered necessary during police investigations: lineups and confessions. In *United States v. Wade* [*18*] the Supreme Court, relying on the traditional Sixth Amendment standard of whether the stage of the proceeding was "critical," applied the right to counsel to postindictment lineups. A "critical" stage is defined as one "where counsel's absence might derogate from the accused's right to a fair trial" [*19*]. The lineup was considered "critical" because of the high risk of improper suggestion, coupled with the judicial experience that such suggestibility was difficult to establish later at trial, because the defendant or witness may not even have been aware of the improper influence and the witness would be reluctant to recant an identification once it has been made. The lawyer's function is to ensure that the identification is free of such suggestibility, either by objecting at the lineup or reconstructing the tainted procedure at trial. The attorney's presence, therefore, is a means of preserving the accused's "right meaningfully to cross-examine the witnesses against him and to have effective assistance of counsel at the trial itself" [*20*].

In the case of confessions, the presence of an attorney was originally predicated upon the right to counsel in *Escobeda v. Illinois* [*21*], but this reasoning was subsequently re-

vised by *Miranda v. Arizona* [22]. In *Miranda* the requirement of informing a suspect in custody that he had a right to the presence of an attorney was not based on a finding that the interrogation was a "critical stage," but rather that the presence of counsel was deemed necessary to ensure that the suspect understood his privilege against self-incrimination. Hence, *Miranda* is considered a "Fifth" and not a "Sixth" Amendment case [23]. Although the constitutional underpinnings with respect to counsel are different in confessions and lineups, the function of counsel is similar in both situations. Both procedures are subject to undue influence—the coercive confession and the suggestive lineup. In both cases, station house secrecy prevents the exposure of such influence at trial. The presence of counsel is a means of ensuring other constitutional rights—the right to confrontation with lineups and the right against self-incrimination with confessions.

These same considerations are not persuasive when forensic procedures are involved, because the suspect's contact with the police differs significantly. As the Court emphasized in *Schmerber* (blood tests) and *Dionisio* (voice exemplars), there is no issue of the right to counsel buttressing the privilege against self-incrimination because the Fifth Amendment is not operative in this context. In *Gilbert v. California* [24], a companion case of *Wade*, the Court was asked to decide whether the taking of handwriting exemplars from a suspect constituted a "critical stage" entitling the accused to the assistance of counsel under the Sixth Amendment. In ruling against the defendant, the Court stated that there existed only "minimal risk that the absence of counsel might derogate from his right to a fair trial" [25]. Evidence collected for forensic analysis simply does not present the potential for abuse found in confessions and lineups. First, the examiner—the forensic scientist—is introduced into the process. While most defense attorneys would not consider a government sponsored scientist "neutral," he, as stated in a different context, is not as involved in "the often competitive enterprise of ferreting out crime" [26] as are the police. In addition, this involvement of the examiner intrudes upon the station house secrecy that is present with confessions and lineups. Second, avenues for meaningful cross-examination to challenge the government's case are open to the defense; they do not have to rely on a police officer's admission of overreaching in obtaining a confession or a witness's recanting a lineup identification. The defense can challenge the government's expert on the reliability and limitations of the specific scientific technique used, as well as his methodology, the use of controls, his qualifications, and the chain of custody. Moreover, scientific evidence can be attacked by defense experts. In many techniques—those involving blood, hair, fingerprints, handwriting, voiceprints—the defendant can supply additional exemplars for examination. Other types of examination consume only a minute part of the physical evidence or are nondestructive (for example, neutron activation analysis), and thus reexamination is possible. Most important, however, there is no function for an attorney to perform, even if he is present when his client provides such samples or exemplars.

In *United States v. Love* [27], the Fifth Circuit held that the defendant was not entitled to the presence of counsel when acetone swabs were taken from his hands. The court went on to state, however, that the preferred procedure would be to permit the defendant's expert chemist to be present when the acetone swabbings were analyzed for the presence of nitrates that might link the defendant with a bombing.

Search and Seizure

In recent years the most controversial aspect of obtaining physical evidence from suspects for identification and comparison by forensic techniques, has centered around the proscription of the Fourth Amendment against unreasonable searches and seizures. The Federal Courts of Appeals have split on this issue. The Seventh and Eighth Circuits have

ruled that the Fourth Amendment is applicable when a suspect is required to furnish handwriting exemplars [*28*]; the Second Circuit disagreed [*29*]. Similarly, the Seventh Circuit considered the taking of voice exemplars to be within the scope of the Fourth Amendment [*30*] while the Sixth Circuit asserted that an examination of a suspect's hands under ultraviolet light was not subject to the Fourth Amendment [*31*]. Some issues in this controversy were settled in 1973 by two companion Supreme Court decisions: *United States v. Dionisio* [*32*] and *United States v. Mara* [*33*]. The setting for these cases was the use of the grand jury subpoena power to compel the production of handwriting and voice exemplars for comparison purposes. As the Court noted in *Dionisio*, there are actually two Fourth Amendment issues raised when physical evidence is obtained from a suspect. First, there is a "seizure" of the "person," which brings the suspect into contact with government agents, and second, there is a subsequent search for and seizure of the physical characteristics or trace evidence. If a court holds that there is both a seizure of the person and a subsequent search of the person, the defense can prevail by successfully attacking either the seizure or the search.

Seizure of the Person

Before trace evidence or physical characteristics can be obtained from a suspect, the suspect must be detained under some form of government control. Such control raises the issue of whether the person has been "seized" within the meaning of the Fourth Amendment. Forensic evidence has been collected through the use of grand jury subpoenas, at the time of arrest, during imprisonment, and while suspects have been detained on less-than-probable cause.

Dionisio and *Mara* involved only one type of governmental detention—a grand jury appearance pursuant to a subpoena. In those decisions, the Court ruled that compliance with a grand jury subpoena was not a "seizure" under the Fourth Amendment. In reaching this conclusion, the Court noted that every person had an obligation "to appear and give his evidence before the grand jury" [*34*], and that a subpoena was not as intrusive as an arrest because it was served as is any other legal process, involved no stigma, and was under the continuous control of the courts.

Physical evidence can also be obtained from a suspect at the time of arrest. Unlike the grand jury subpoena, however, an arrest is a "seizure" of the person under the Fourth Amendment, and probable cause is therefore required. In *Schmerber* the defendant was arrested for driving while under the influence of alcohol before blood was extracted. Probable cause for the arrest was based upon the officer's observation of the defendant at both the scene of the accident and the treating hospital, and his findings of the smell of liquor on the defendant's breath as well as the glassy, bloodshot appearance of his eyes. The Court considered the constitutionality of this initial seizure (the arrest) before turning to the Fourth Amendment implications of withdrawing blood. In *Davis v. Mississippi* [*35*], fingerprints were excluded from evidence because the comparative prints were taken during an illegal detention. In that case a rape victim could not provide any further description of her attacker than his approximate age and race. Fingerprints and palm prints, however, were found on the window used by the assailant to gain entry into the victim's house. Consequently, a dragnet procedure with the subsequent fingerprinting of 24 young blacks was conducted by the police. The defendant was later again seized and a second set of prints was taken; these were the prints used for comparison and introduced at trial. The Court ruled that the defendant's rights under the Fourth Amendment were violated because the detention by the police during which the fingerprints were obtained was not authorized by a warrant nor based upon probable cause.

If a suspect is incarcerated pursuant to a court-imposed sentence and physical evidence of other crimes is sought, the same reasoning would be applicable, with the initial seizure being based upon the court's authority to sentence instead of the police's power to arrest.

The one area that has not been resolved by the Supreme Court has been detention with less-than-probable cause. The controversy was generated by dictum in the *Davis v. Mississippi* opinion [*36*]:

> It is arguable, however, that, because of the unique nature of the fingerprinting process, such detentions might, under narrowly defined circumstances, be found to comply with the Fourth Amendment even though there is no probable cause in the traditional sense.

The invitation contained in this dictum did not go unanswered. In 1969, the Supreme Court of Colorado adopted Rule 41.1 of the Rules of Criminal Procedure, which provided for court-ordered fingerprinting. This Rule requires that three criteria be satisfied before such an order can be issued. A sworn affidavit must establish that: (1) a known criminal offense has been committed; (2) there is reason to believe that the fingerprinting of the person named in the affidavit will aid in the apprehension of the perpetrator of the offense, or there is reason to suspect that the named person is connected with the perpetration of the crime; and (3) the requested fingerprints are not in the files of the agency employing the affiant. The Rule also contains provisions for the content of the order, its execution, and its return, as well as a procedure for a motion to suppress.

During the same month Senator McClellan introduced a bill, S. 2997, which would provide a judicial procedure for obtaining evidence of identifying physical characteristics [*37*]. Instead of a court order, this bill proposed to require compliance by subpoena issued by a Federal district judge. More important, however, is the fact that the scope of the identifying techniques encompassed by the bill went beyond fingerprints to include "palm prints, footprints, measurements, handwriting, hand printing, sound of voice, blood samples, urine samples, saliva samples, hair samples, comparative personal appearance, or photographs of an individual." Such a subpoena could be issued if: (1) reasonable cause exists for belief that certain Federal offenses have been committed, (2) the evidence may contribute to the identification of the person who committed such offense, and (3) such evidence cannot be obtained through other means. This bill has never been enacted into law.

In addition, the *Davis* dictum was the basis for a proposed amendment to the Federal Rules of Criminal Procedure entitled "Nontestimonial Identification" [*38*]. Nontestimonial identification as defined by the proposal includes "fingerprints, palm prints, footprints, measurements, blood specimens, urine specimens, saliva samples, hair samples, or other reasonable physical or medical examination, handwriting exemplars, voice samples, photographs, and line-ups." Under the proposed rule, a person could be ordered by a Federal magistrate to participate in one of the above procedures upon the application of a Federal law enforcement officer or attorney if three conditions were satisfied. The three grounds are that (1) there is probable cause to believe an offense has been committed; (2) there are reasonable grounds, not amounting to probable cause, to believe that the named person committed the offense; and (3) the identification procedure will be of "material aid" in determining whether the named person committed the offense. Resort to these procedures can occur before arrest, prior to trial, and, in "special circumstances," during trial [*39*].

In addition to the *Davis* dictum, proponents rely on *Terry v. Ohio* [*40*] to justify court-ordered identification procedures. In *Terry* the Supreme Court held that a "stop and frisk" was a seizure under the Fourth Amendment, but a permissible one notwithstanding

the lack of probable cause to arrest. Reasonable belief to suspect was sufficient for the limited detention in *Terry*. Variations of this standard appear in the proposals for investigative detentions for identification. Moreover, unlike *Terry*, these procedures have the added safeguard of being under court control. In fact, the McClellan proposal adopts a subpoena technique similar to the grand jury subpoena upheld in *Dionisio* and *Mara*.

Notwithstanding the lack of statutory or rule authority, some courts have already ventured into this area, using court orders to compel suspects to provide handwriting exemplars [*41*] and to appear in lineups [*42*]. The basis for these orders is not clear; some courts have apparently relied on a theory of inherent authority [*43*], while others seem to have considered such orders as types of search warrants [*44*]. The importance of these cases may be minimal, inasmuch as a prosecutor relying on *Dionisio* can probably obtain through a grand jury subpoena whatever evidence he cannot obtain through a court order.

The proposed rules provide for the issuance of contempt citations if an order to appear for an identification procedure is not obeyed. This is the usual sanction for refusing to comply with court orders and has precedent in the case law. In *United States v. Doe* [*45*], the Second Circuit upheld a contempt sentence when a defendant refused to furnish handwriting exemplars pursuant to a grand jury subpoena, and in *United States v. Hammond* [*46*] the Fourth Circuit upheld an imprisonment based on a contempt citation when a suspect refused to obey a court order requiring him to appear in a lineup. A defendant's failure to appear could also be commented upon by a prosecutor if there is a subsequent trial. The question remains unresolved, however, whether in a particular case a defendant may much prefer a contempt sentence to supplying the prosecution with the crucial evidence linking him with a serious crime and a possible lengthy prison term.

The Search for and Seizure of Physical Evidence From a Suspect

The Supreme Court in *Dionisio* and its companion case, *Mara*, held that a person's voice and handwriting, respectively, were outside the purview of the Fourth Amendment. In reaching this conclusion the Court relied on *Katz v. United States* [*47*], the leading case on defining the scope of the Fourth Amendment. Prior to the *Katz* decision the boundaries of the Fourth Amendment's protection were defined by "property" concepts; that is, there existed certain constitutionally protected areas in which a person was free from governmental intrusion. These protected areas included a person's house, store, business office, hotel room, and automobile. The *Katz* decision adopted a new standard for determining what activity fell within the Amendment's protection; the new standard substituted a privacy approach for the traditional property approach. According to the Court,

> The Fourth Amendment protects people, not places. What a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection. . . . But what he seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected [*48*].

Based on this privacy approach, the Court reasoned in *Dionisio* and *Mara* that the physical characteristics of a person's voice and handwriting cannot reasonably be expected to be kept private when such characteristics are repeatedly exposed to the public during the course of normal daily activities. "No person can have a reasonable expectation that others will not know the sound of his voice, any more than he can reasonably expect that his face will be a mystery to the world" [*49*].

The Court went on to distinguish the required disclosure of the voice from the required extraction of blood, because when the latter procedure had been challenged in *Schmerber*,

the Court had stated that blood testing procedures "plainly constitute searches of 'persons,' " within the meaning of the Fourth Amendment [*50*]. *Schmerber* was decided prior to *Katz*, and therefore was not predicated on the standard of reasonable expectation of privacy enunciated in *Katz*. The *Dionisio* Court never explained why voice and handwriting exemplars were different from blood tests, nor was any attempt made to support *Schmerber* by the *Katz* rationale. The Court merely commented in *Dionisio* that the compelled disclosure of a voice is "immeasurably further removed from the Fourth Amendment protection than was the intrusion into the body effected by the blood extraction in *Schmerber*" [*51*]. Since *Schmerber* was left undisturbed by *Dionisio*, it can be argued that the Court would recognize the existence of a reasonable expectation of privacy with respect to bodily intrusions. Thus, depending upon the requirements of the forensic technique employed, there are two possible categories in which the technique may be placed—one within the scope of the Fourth Amendment (*Schmerber*) and one without it (*Dionisio-Mara*). The unresolved issue is how to decide in which category a specific technique falls. According to the Court in *Dionisio*, fingerprints would be classified with handwriting and voice exemplars [*52*]. Subsequently, in *Cupp v. Murphy* [*53*] the Court held that fingernail scrapings of a murder suspect implicated the Fourth Amendment, because the procedure went beyond the mere physical characteristics constantly exposed to the public that were present in *Dionisio*.

The above discussion may suggest that the distinguishing line between the two categories could be drawn between those techniques that involve a bodily intrusion and those that deal with external physical characteristics and trace evidence. Under this theory, fingernail scrapings would be classified as intrusions of the body inasmuch as a penetration under the nail occurs during the procedure. Such a dichotomy, however, would be inconsistent with the *Katz* rationale. For example, in a comparison of hair by gross and microscopic examination, hair samples from the suspect's body and pubic areas, as well as his head, would be desired by the examiner [*54*]. While the suspect may not have a reasonable expectation of privacy under *Katz* with respect to hair on his head because of its continuous visibility to the public, pubic and other body hair presents a different problem. Another illustration would be a rape case in which a defendant was the subject of a penis scraping that revealed menstrual blood of the victim's type [*55*]. Although these examples do not involve bodily intrusions, they would be encompassed by the Fourth Amendment under *Katz* [*56*].

Another possible line of demarcation would be between physical characteristics (voice, handwriting, and fingerprints) and physical evidence (blood and fingernail scrapings). This approach, however, is not free from problems. It would be difficult to explain why a person had a reasonable expectation of privacy with respect to substances under his fingernails but not to his fingerprints. Moreover, physical evidence such as soil, glass, hair, fibers, and blood from a crime scene that attached to the outer garments of a suspect may be "exposed" to public view. The answers will have to wait for further clarification by the Court. These considerations would affect such procedures as offered by Senator McClellan's bill or the proposed Rule of the Federal Rules of Criminal Procedure. Even if the detention of a suspect on less-than-probable cause to *arrest* for these identification procedures is held to be constitutional, there remains the issue of whether evidence such as blood can be obtained from the suspect without a showing of probable cause to *search*.

Determining that a forensic technique falls within the protection of the Fourth Amendment does not necessarily preclude the recovery of the desired evidence. The *Schmerber* Court described the function of the Amendment as follows: The "Fourth Amendment's proper function is to constrain, not against all intrusions as such, but against intrusions

which are not justified in the circumstances, or which are made in an improper manner" [57]. Once the applicability of the Fourth Amendment is recognized, such questions as the existence of probable cause and the necessity of obtaining a warrant are raised.

In *Graves v. Beto* [58], a Federal district court emphasized the lack of a warrant in suppressing evidence of blood type in a rape case. Graves was originally arrested for public drunkenness. While he was in custody, the police learned of an alleged rape and focused their investigation on Graves because of a close similarity between his and the assailant's description. A blood test was suggested to Graves, who was unaware of the police's suspicions concerning the rape. Graves's request for counsel was denied. After being led to believe that the test would be used only to determine whether he was intoxicated, the defendant gave his consent. The court found that there was no valid waiver of Fourth Amendment rights under these conditions, in which the defendant was in custody without counsel and tricked into giving his consent. Without a waiver a search warrant was required, and therefore the evidence of blood type was excluded.

There are, however, recognized exceptions to the warrant requirement. The *Schmerber* decision, for example, involved a blood-alcohol test. The Court was cognizant that the alcohol content in blood diminishes with the passage of time. This factor was critical to the Court's finding an exception to the warrant requirement, based on the theory of imminent destruction of evidence. Such reasoning would not apply to blood typing tests because the property—blood type—sought to be identified by the examination is not transient in nature.

Another possible justification for the warrantless search in *Schmerber* would be a search incident to an arrest [59]. This theory would no longer be acceptable in light of the Supreme Court's decision in *Chimel v. California* [60], in which the scope of a search incident to an arrest was limited to a search of the person arrested and the area within his immediate control. Although a bodily intrusion for blood would technically be a search of the "person" arrested, such a result would be inconsistent with the two reasons offered by the Court in *Chimel* for permitting a warrantless search incident to an arrest. First, the search protects the arresting officer from any weapons that might be used to resist arrest or effect an escape, and second, the search prevents the concealment or destruction of evidence. Blood type neither poses a danger to the arresting officer nor is destructible. Therefore, a warrant authorizing the withdrawal of blood should be secured unless the suspect consents.

In *Cupp v. Murphy* [61], decided in May 1973, the Supreme Court upheld a search and seizure of fingernail scrapings under the *Chimel* doctrine. During the voluntary station house questioning of the defendant about his wife's strangulation murder, the police observed a dark spot on the defendant's finger, which they suspected to be blood. Despite the defendant's protests, fingernail scrapings were taken. The scrapings contained traces of skin and blood as well as fabric from the victim's garments. Although the defendant was not formally under arrest at the time the scrapings were removed, the Court assumed, without deciding, that probable cause for an arrest existed. The Court went on to state that this limited search and seizure was permissible under *Chimel* in order to prevent the destruction of evidence. The Court indicated that a search that extended beyond fingernail scrapings would not have been justified in these circumstances. Although the Court cites *Chimel* as authority for the search, the doctrine that permits warrantless searches to prevent the imminent destruction of evidence would seem to be a sufficient basis for upholding the search, without resort to the search incident to an arrest theory.

The Fourth Amendment also places limitations on the type of forensic technique used and the manner in which the procedure is administered; both must meet the standard of

reasonableness. The Court in *Schmerber* recognized that: "Extraction of blood samples for testing is a highly effective means of determining the degree to which a person is under the influence of alcohol" [*62*]. Requiring a person to submit to a technique that had not proved reliable or effective would therefore be questionable. The Court also considered the administration of such a test by a physician in a hospital environment a reasonable method for the extraction, but it warned that the test's administration by the police in the privacy of the station house would raise serious questions because it might "invite an unjustified element of personal risk of infection and pain" [*63*]. In *Creamer v. State* [*64*], the Georgia Supreme Court ruled that the surgical removal of bullet fragments from a suspect was a reasonable procedure under the Fourth Amendment. The Supreme Court of Illinois reached the opposite conclusion in *Adams v. State* [*65*].

Due Process

An argument of due process was raised in *Breithaupt v. Abram* [*66*], a 1957 Supreme Court decision, which—like the *Schmerber* case—involved a blood-alcohol test. The defendant in *Breithaupt* relied on *Rochin v. California* [*67*], in which the Court held that the forcible stomach pumping of a suspect to recover narcotic pills "shocks the conscience" and does not comport with traditional ideas of fair play and decency, thereby violating due process. In distinguishing the extraction of stomach contents from the extraction of blood, the *Breithaupt* Court emphasized that the latter procedure, "under the protective eye of a physician," was a routine and scientifically accurate method and therefore did not involve the "brutality" and "offensiveness" present in *Rochin* [*68*]. This ruling was reaffirmed in *Schmerber*.

The *Rochin* and *Breithaup* decisions predated the applicability of the Bill of Rights to the States through the due process clause of the Fourteenth Amendment. Under the Court's current approach, such issues would not be addressed in terms of due process but rather as possible violations of specific constitutional guarantees enumerated in the Bill of Rights. For example, the Fourth Amendment requirements outlined in *Schmerber* on the reasonableness of the procedure and the manner of performance, would probably be the basis for examining future questions such as the surgical removal of a bullet. The due process clause, however, would still be relevant in certain contexts. In speaking of the required production of handwriting exemplars, the Second Circuit stated that "the due process clause protects against the use of excessive means to obtain" such evidence [*69*].

Summary

The importance of forensic science to the field of law enforcement has increased dramatically in recent years. Admittedly, the use of science in criminal investigations is not a new phenomenon; the President's Commission on Law Enforcement and Administration of Justice called the crime laboratory "the oldest and strongest link between science and technology and criminal justice" [*70*]. Nevertheless, the development and application of scientific knowledge to the forensic field, underwritten by Law Enforcement Assistance Administration funds, has reached an unprecedented scale. Only in recent years, for example, have such techniques as voiceprints [*71*] and neutron activation analysis [*72*] appeared in the reported cases.

The collection of scientific evidence, like that of all evidence, is subject to the constitutional limitations enumerated in the Bill of Rights. Constitutional decisions, through the mechanism of the exclusionary rule, have had a significant impact on the types of evidence the police use. These decisions have highlighted the importance of scientific evi-

dence in two ways. First, decisions such as *Miranda* and *Wade* have tended to undermine the reliance of the police on traditional crime-solving methods, such as confessions and eyewitness identifications. Justice Goldberg voiced the Supreme Court's dissatisfaction with confessions in the following passage:

> We have learned the lesson of history, ancient and modern, that a system of criminal law enforcement which comes to depend on the "confession" will, in the long run, be less reliable and more subject to abuses than a system which depends on extrinsic evidence independently secured through skillful investigation [*73*].

Judicial concern over the use of eyewitness identification has also been expressed:

> The vagaries of visual identification evidence have traditionally been of great concern to those involved in the administration of criminal law. It has been thought by many experts to present what is conceivably the greatest single threat to the achievement of our ideal that no innocent man shall be punished [*74*].

Second, the judicial treatment of the constitutional issues that have arisen when the police have resorted to forensic techniques has not had this inhibitory effect. On the contrary, these rulings guarantee the expanded use of forensic techniques. By adopting a restrictive view of the privilege against self-incrimination in *Schmerber v. California*, the Supreme Court removed the principal Fifth Amendment objection to the collection of forensic evidence from suspects. Under *Schmerber* the test is whether the evidence is testimonial in character. As discussed above, forensic techniques involve nontestimonial evidence and, therefore, the collection of such evidence falls outside the protection of the self-incrimination clause.

The combined effect of *Gilbert v. California* and *Kirby v. Illinois* has eliminated most right-to-counsel (Sixth Amendment) questions raised by the use of forensic methods. In *Kirby* the Supreme Court held that the right to counsel commenced with the initiation of "adversary judicial proceedings . . ." [*75*]. Forensic techniques are often employed in the investigative rather than the adversary stage of a case, that is, prior to the time that the right to counsel attaches under the *Kirby* decision. In *Gilbert* the Court held that the right to counsel was not applicable when handwriting exemplars were obtained from a suspect, because there existed "minimal risk that the absence of counsel might derogate from his right to a fair trial" [*76*]. In effect the Court in *Gilbert* found that the collection of handwriting exemplars did not present the problems associated with lineups and confessions, the other areas in which the presence of counsel has been required. Most forensic procedures present situations analogous to the situation involved in *Gilbert*.

The most recent Supreme Court decision in this area, *United States v. Dionisio*, involved the Fourth Amendment. As recognized in *Dionisio*, two Fourth Amendment issues are raised when forensic evidence is obtained from a suspect: (1) the initial detention of the suspect may constitute a seizure of the person and (2) the removal of physical characteristics or trace evidence may constitute a search for and seizure of evidence. According to the Court, compliance with the grand jury subpoena in *Dionisio* did not result in a seizure of the person. The most frequent type of detention, however, is an arrest; an arrest is a seizure of the person within the meaning of the Fourth Amendment. If an arrest is not based upon probable cause, evidence seized as a result of the arrest is inadmissible. The unresolved issue is whether a detention on less-than-probable cause for the purpose of obtaining forensic evidence is constitutional. With respect to the second Fourth Amendment issue—(2) above—the Court in *Dionisio*, and a companion case *Mara*, held that physical characteristics such as handwriting and voice exemplars were not protected by the Fourth Amendment. In *Schmerber v. California*, however, the Court had held that

the withdrawal of blood came within the scope of the Fourth Amendment. The critical issue is how to determine into which category a specific forensic technique falls. If the Fourth Amendment is applicable, the next inquiry concerns the existence of probable cause to search and the need for a search warrant.

References

[1] 384 U.S. 757 (1966).
[2] *Id.* at 762, quoting *Miranda v. Arizona*, 384 U.S. 436, 460 (1966).
[3] 218 U.S. 245 (1910).
[4] 388 U.S. 218 (1967).
[5] *Id.* at 222.
[6] 388 U.S. 263 (1967).
[7] *Id.* at 266–267.
[8] 410 U.S. 1 (1973).
[9] *Id.* at 7.
[10] "Some tests seemingly directed to obtain 'physical evidence,' for example, lie detector tests measuring changes in body function during interrogation, may actually be directed to eliciting responses which are essentially testimonial." *Schmerber v. California*, 384 U.S. 757, 764 (1966).
[11] 282 F. Supp. 373 (S.D. Ind. 1968).
[12] *Id.* at 374. See *United States v. Doe* (*Schwartz*), 457 F.2d 895, 896 (2d Cir. 1972), for a different conclusion.
[13] See *United States v. Harris*, 453 F.2d 1317, 1320 n.1 (8th Cir. 1972).
[14] 192 S.E. 2d 350 (Ga. 1972).
[15] See *Powell v. Alabama*, 287 U.S. 45 (1932); *Hamilton v. Alabama*, 368 U.S. 52 (1961); *White v. Maryland*, 373 U.S. 59 (1963); and *Coleman v. Alabama*, 399 U.S. 1 (1970).
[16] 406 U.S. 682 (1972).
[17] *Id.* at 689.
[18] 388 U.S. 218 (1967).
[19] *Id.* at 226.
[20] *Id.* at 227.
[21] 378 U.S. 478 (1964).
[22] 384 U.S. 436 (1966).
[23] See *Kirby v. Illinois*, 406 U.S. 682, 689 (1972).
[24] 388 U.S. 263 (1967).
[25] *Id.* at 267.
[26] *Johnson v. United States*, 333 U.S. 10, 14 (1948).
[27] 482 F.2d 213 (5th Cir. 1973).
[28] *Mara v. United States*, 454 F.2d 580 (7th Cir. 1971), *rev'd*, 410 U.S. 19 (1973); *United States v. Harris*, 453 U.S. 1317, 1319 (8th Cir. 1972).
[29] *United States v. Doe* (*Schwartz*), 457 F.2d 895 (2d Cir. 1972).
[30] *Dionisio v. United States*, 442 F.2d 276 (7th Cir. 1971), *rev'd*, 410 U.S. 1 (1973).
[31] *United States v. Richardson*, 388 F.2d 842, 845 (6th Cir. 1968).
[32] 410 U.S. 1 (1973).
[33] 410 U.S. 19 (1973).
[34] 410 U.S. at 9–10.
[35] 394 U.S. 721 (1969). See *United States v. DePalma*, 414 F.2d 394 (9th Cir. 1969), *cert. denied*, 396 U.S. 1046 (1970).
[36] 394 U.S. at 727.
[37] Reprinted with discussion at 115 Cong. Rec. 28896–28900 (1969).
[38] Reprinted with Advisory Committee Note at 52 F.R.D. 467 (1971).
[39] For an identification procedure that was drafted prior to *Davis*, see ABA Standards Relating to Discovery and Procedure Before Trial, section 3.1 (Approved Draft 1970).
[40] 392 U.S. 1 (1968).
[41] See *United States v. Rudy*, 429 F.2d 993 (9th Cir. 1970); *United States v. Izzi*, 427 F.2d 293 (2d Cir.), *cert. denied*, 399 U.S. 928 (1970).
[42] See *United States v. Hammond*, 419 F.2d 166 (4th Cir. 1969); *United States v. Allen*, 408 F.2d 1287 (D.C. Cir. 1969).
[43] See *Adams v. United States*, 399 F.2d 574, 579 (D.C. Cir. 1968); McGowan, *Constitutional Interpretation and Criminal Identification*, 12 Wm. & Mary L. Rev. 235, 247 (1970).
[44] See *United States v. Praigg*, 336 F. Supp. 480 (C.D. Cal. 1972); *United States v. Bailey*, 327 F. Supp. 802 (N.D. Ill. 1971).
[45] 405 F.2d 436 (2d Cir. 1968).
[46] 419 F.2d 166 (4th Cir. 1969). See *United States v. Rudy*, 429 F.2d 993 (9th Cir. 1970).
[47] 389 U.S. 347 (1967).
[48] *Id.* at 351–352.

[49] 410 U.S. at 14. According to the 8th Circuit, however, handwriting is not something that the defendants "knowingly exposed to the public." *United States v. Harris*, 453 F.2d 1317, 1320 (8th Cir. 1972).
[50] 384 U.S. at 767.
[51] 410 U.S. at 14.
[52] *Id.* at 15.
[53] 412 U.S. 291 (1973).
[54] See *United States v. D'Amico*, 408 F.2d 331, 333 (2d Cir. 1969) (in-custody taking of hair sample may be subject to the Fourth Amendment but not unreasonable).
[55] See *Brent v. White*, 398 F. 2d 503 (5th Cir. 1968).
[56] See *United States v. Doe* (*Schwartz*), 457 F.2d 895, 898 (2d Cir. 1972) ("scars or birthmarks on parts of the body not normally exposed" would come under *Schmerber*).
[57] 384 U.S. at 768.
[58] 301 F. Supp. 264 (E.D. Tex. 1969), *aff'd*, 424 F.2d 524 (5th Cir.), *cert. denied*, 400 U.S. 960 (1970).
[59] "Given these special facts, we conclude that the attempt to secure evidence of blood-alcohol content in this case was an appropriate incident to petitioner's arrest." 384 U.S. at 771.
[60] 395 U.S. 752 (1969).
[61] 412 U.S. 291 (1973).
[62] 384 U.S. at 771.
[63] *Id.* at 772.
[64] 192 S.E.2d 350 (Ga. 1972).
[65] 299 N.E.2d 834 (Ill. 1973).
[66] 352 U.S. 432 (1957).
[67] 342 U.S. 165 (1952).
[68] 352 U.S. at 435.
[69] *United States v. Doe* (*Devlin*), 405 F.2d 436, 438 (2d Cir. 1968).
[70] President's Commission on Law Enforcement and Administration of Justice, *The Challenge of Crime in a Free Society*, 1967, p. 255.
[71] See *State v. Trimble*, 192 N.W.2d 432 (1971); *United States v. Wright*, 37 C.M.R. 447 (1967); *United States v. Raymond*, 337 F. Supp. 641 (D.C. 1972).
[72] See *United States v. Stifel*, 433 F.2d 431 (6th Cir. 1970), *cert. denied*, 401 U.S. 994 (1971).
[73] *Escobeda v. Illinois*, 378 U.S. 478, 488–489 (1964).
[74] McGowan, *Constitutional Interpretation and Criminal Identification*, 12 Wm. & Mary L. Rev. 235, 238 (1970).
[75] 406 U.S. at 688.
[76] 388 U.S. at 267.

114 Ivy Drive, Apt. 5
Charlottesville, Va. 22901