Electronic Tracking Devices and Privacy: See No Evil, Hear No Evil, But Beware of Trojan Horses

Kara L. Cook
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The danger of unbounded liberty and the danger of bounding it have produced a problem in the science of government which human understanding seems hitherto unable to solve.

Dr. Samuel Johnson

INTRODUCTION

In the late 1700's when Dr. Samuel Johnson wrote of the conflict between "bounded and unbounded liberty" he was unduly optimistic when he implied that the problem was solvable. Two hundred years later, the attainment of an equilibrium between the needs of law enforcement and the right to individual privacy continues to elude human understanding.

Privacy, the right "to be let alone," needs to be weighed by the courts against the long-recognized maxim that "the safety of the people is the highest law." However, an imbalance exists because each interest, and the importance attached to each by society, is dynamic. A change in the boundaries of one will necessarily require a realignment of the other. A recent challenge to this balance is the development and use of an electronic surveillance technique known as the electronic tracking device. This device, colloquially known as a "beeper," is a battery-operated instrument that emits periodic signals which when monitored establishes the location of the device and the object to which it is attached.

In this equation, it appears that the scales are weighted against even beneficial use of devices with electronic components.1 Governor

2. "Imprimis interest rei publicae ut pax in regno conservatur." M. Hale, Pleas of the Crown 53 (1678); see also R. Pound, III, Jurisprudence 292 (1959); L. Coke, Second Institutes 158 (1678). This ideological conflict has often been debated by legal authorities as illustrated by Learned Hand's admonition that "[w]hat we need to fear is the archaic formalism and the watery sentiment that obstructs, delays, and defeats the prosecution of crime." United States v. Garsson, 291 F. 646, 649 (S.D.N.Y. 1923). In contrast, Professor Amsterdam has warned that "the history of the destruction of liberty . . . has largely been the history of the relaxation of [procedural] safeguards in the face of plausible-sounding governmental claims of a need to deal with widely frightening and emotional-freighted threats to the good order of society." Amsterdam, Perspectives on the Fourth Amendment, 58 Minn. L. Rev. 349, 354 (1974) [hereinafter cited as Amsterdam].
3. The use of magnetometers and x-ray machines to aid the police in detecting objects has been held to be a search. United States v. Palazzo, 488 F.2d 942 (5th Cir. 1974); United States v. Slocum, 464 F.2d 1180 (3d Cir. 1972); United States v. Epperson, 454 F.2d 769 (4th
ment abuse of privacy interests through patently illegal use of electronic devices, public fears concerning the abridgement of constitutionally protected privacy rights, and sympathetic legislative action combined, have moved the courts to overcompensate in rulings involving sense-enhancing law enforcement techniques.

The clash between law enforcement technology and privacy interests has led to dichotomous rulings regarding constitutionality of warrantless installation of the electronic tracking device. Although the beeper is a simple, single-function device, the courts, in analyzing its legal status in relation to privacy infringements, have encountered difficult problems of constitutional analysis. These problems arise from the essentially protean nature of the right to privacy, since few concepts are less amenable to definition or legal

Cir. 1972). Use of a helicopter to view marijuana in a yard not visible from the road has also been held to constitute a search. People v. Sneed, 32 Cal. App. 3d 535, 108 Cal. Rptr. 146 (1973).

4. Government excesses in the area of surveillance include the military activities at the 1968 Democratic National Convention, FBI surveillance of various civil rights leaders and of participants at the 1964 Democratic Convention, wiretapping by the White House "plumbers" unit, computer compilation of thousands of files at the CIA related to domestic security, and the maintenance of FBI files on members of Congress. See Senate Select Comm. on Intelligence, Subcomm. on Intelligence and the Rights of Americans, Electronic Surveillance within the United States for Foreign Intelligence Purposes, S. Doc. No. 3197, 94th Cong., 2d Sess. 19 (1976). [hereinafter cited as Subcomm. on Intelligence].

5. See Freedom of Information Act, 5 U.S.C. § 552 (1970 & Supp. IV 1974). This Act governs public access to all records maintained by the federal government. It describes certain kinds of information which each agency must make available to the public either by publication in the Federal Register or otherwise. In addition, other agency records must be provided on request where the request "reasonably describes" the records sought and otherwise complies with the Act's procedural rules. The requestor is not required to show any special need to see the records. Finally, the request must be answered by the agency within ten days (or twenty under "unusual circumstances"). See also Privacy Act of 1974, 5 U.S.C. § 552a (Supp. IV 1974). The Act's purpose is to strengthen an individual's control of the flow of information about himself by authorizing him to obtain access to it and by restricting its disclosure without his consent both within and without the government. Comprehensive privacy statutes have also been adopted by seven states: Ark. Stat. Ann. § 16-801 et seq. (Supp. 1975); 1976 Conn. Pub. Act 76-421 (June 9, 1976); Mass. Ann. Laws ch. 66A, §§ 1-3; ch. 30, § 63; ch. 214, § 3B (Supp. 1977); Minn. Stat. Ann. § 15.162 et seq. (1977); Ohio Rev. Code Ann. §§ 1347.01-.10, 1347.99 (Page) (Supp. 1976); Utah Code Ann. § 63-50-1 et seq. (Supp. 1977); Va. Code Ann. § 2.1-377 et seq. (Supp. 1977).

Therefore, when this right is weighed against the theoretically abstract intrusion caused by electronic tracking devices, the scales of justice require substantive guidelines if a just equilibrium is to be achieved. To date, courts have failed to formulate rational bases to support their decisions regarding the legal status of electronic tracking devices. This lack of precise standards is manifested in the incompatible decisions reached by the Fifth and Ninth Circuits in electronic tracking cases involving similar facts. Further, when the Eighth Circuit was confronted with the same constitutional issue, it recognized the difficult nature of this issue, but avoided rendering a decision.

Because of the failure of the courts to establish necessary guidelines, there is an urgent need for, and this Note will attempt to provide, a general framework which delineates and analyzes constitutionally defined privacy interests relevant to the use of electronic tracking devices by government agencies.


9. Title III of the Omnibus Crime Control and Safe Streets Act of 1968 (18 U.S.C. §§ 2510-20 (1970)) is the primary federal constraint on the use of electronic surveillance techniques in criminal investigations. It focuses particularly on the utilization of any device which involves an interception of wire communications. The core requirement of the statute is a court order authorizing government involvement in electronic surveillance activities. Therefore, because of Title III, the question arises whether the use of electronic tracking devices without a court order is prohibited. Insight into this inquiry is provided by looking to the definitions contained in Title III, because any activity not encompassed within its definitions is not prohibited.

Section 2510(4) of the Act defines interception as "the aural acquisition of the contents of any wire or oral communication through the use of any electronic, mechanical, or other device." (Emphasis added). An aural acquisition involves the sense of hearing, and implies that the information aurally acquired be capable of meaningful interpretation. Therefore, while an argument might be made that the operator of an electronic tracking device acquires aural information by listening to the tone bursts emitted by the beeper, the tone bursts themselves contain nothing intelligible. The operator must take further sensory and logical steps to interpret the message conveyed by the beeps.

Thus, the information acquired through a beeper does not involve the contents of any "oral communication," and therefore beepers are not prohibited under the purview of "interception of aural communications." However, Title III's definition of "wire communication" must be analyzed before concluding that beepers do not fall within the constraints of Title III.

Under section 2510(1) the term "wire communication" is defined as:

any communication made in whole or in part through the use of facilities for the transmission of communications by the aid of wire, cable, or other like connection between the point of origin and point of reception, furnished or operated by any person engaged as a common carrier in providing or operating such facilities . . . .

Although the legislative history of Title III emphasized the comprehensive reach of the term "wire communication," Title III applies only to the "interception" of communications. Hence, the information collected by an electronic tracking device is not subject to Title III.
CONSTITUTIONAL CONSIDERATIONS

The formula established by the Supreme Court in *Katz v. United States* has become the foundation for legal analysis in cases involving privacy considerations. It can be stated as follows: "wherever an individual may harbor a reasonable 'expectation of privacy'... he is entitled to be free from unreasonable government intrusion." Although the basic logic of this formula is apparent, courts too often have applied it without an in-depth understanding of the terms "reasonable expectation of privacy" and "unreasonable government intrusion." Courts have applied this same constitutional test to similar facts, yet conflicting results have been reached because these concepts are so elusive. Thus, these terms must be defined before one can constitutionally analyze the situation of warrantless use of electronic tracking devices.

since electronic tracking devices convey data pertaining to location and movement of the tracked object and not to any form of "interception of wire communications."

Although the electronic tracking device is not subject to Title III regulation by definition, confusion still exists concerning warrantless use of the device. Law enforcement personnel have been reluctant to use such devices without some type of prior judicial approval. Report of the U.S. National Commission For the Review of Federal and State Laws Relating to Wiretapping and Electronic Surveillance 17 (1976) [hereinafter cited as NWC Report]. Since firm legislative guidelines have not been established, a warrant under Rule 41 of the Federal Rules of Criminal Procedure is often sought by law enforcement agents before installing one of these devices, although Rule 41, which governs the issuance of warrants, does not encompass the kind of investigative technique involved in the use of this device.

In recognition of the problem surrounding the need for court authorization, the National Commission for the Review of Federal and State Laws Relating to Wiretapping and Electronic Surveillance recommended an amendment to Title III or a revision of state or federal rules of criminal procedure to resolve this dilemma. NWC Report, supra, at 18. Advocates for more comprehensive control of electronic surveillance have attempted on three occasions to obtain passage of a Bill of Rights Procedures Act, which would require federal agents to obtain a court order before conducting any form of surveillance on a private citizen. SUBCOMM. ON INTELLIGENCE, supra note 4, at 42. However, despite the application of Rule 41 to the use of electronic tracking devices, and despite the desires of some to include these devices under newly proposed laws, electronic tracking devices are not prohibited under any current legislation.

10. 389 U.S. 347 (1967). In *Katz*, the petitioner used a public telephone booth to transmit wagering information in violation of federal law. FBI agents, acting without a warrant, had attached electronic listening and recording devices. The government argued that this activity did not violate the petitioner's fourth amendment rights because the public telephone booth was a public place. The Supreme Court rejected this argument, stating that the purpose of the fourth amendment was to protect individual people, rather than particular places, from unreasonable intrusions. A good discussion of the ruling in *Katz* may be found in Note, *The Reasonable Expectation of Privacy—Katz v. United States, A Postscriptum*, 9 IND. L. REV. 468 (1976).

The Concept of Privacy

Justice Black's statement that privacy "like a chameleon, has a different color for every turning," vividly portrays the broad spectrum of expectations associated with privacy. The use of privacy as an analytical tool lacks discriminatory, descriptive, and predictive qualities. As a concept, it has been recognized since Biblical times, yet it continues to elude twentieth century interpreters of constitutional law. As a value, it has been termed the major component of the "American Dream," although there is no consensus as to what it encompasses and how it should be protected. As a philosophy, privacy has not been universally recognized as a "natural right." As a right, it has no textual basis in the Constitution, yet it percolates the first, third, fourth, fifth and ninth amendments. As a definition, it fails to provide necessary standards, yet repeated rulings in constitutional and common law uphold the right to privacy.

When such an abstraction is the operative concept used to measure the extent of one's legal right to be free from investigative police activities, a viable definition of privacy is mandated; one that

13. Adam's recognition of his nakedness, after eating of the forbidden fruit and his consequent shame is an acknowledgment that his privacy had been violated. See Konvitz, Privacy and the Law: A Philosophical Prelude, 31 LAW & CONTEMP. PROB. 272 (1966).
14. See Gavison, Should We Have a "General Right to Privacy" in Israel?, 12 Is. L. REV. 155 (1977). The passage of a Bill of Protection of Privacy Law by Israel is discussed by Dr. Gavison. The Committee which drafted the bill deliberately refrained from attempting to define "privacy." Elmon, Comment on the Kahn Committee Report of the Protection of Privacy, 12 Is. L. REV. 172 (1977). Special emphasis was instead placed on the various "threats" to privacy which mandated passage of the Bill. See also Article 12 of the Universal Declaration of Human Rights 1948; and Article 8(1) of the European Convention for the Protection of Human Rights and Fundamental Freedoms, 1950. These are two international attempts to protect privacy.
17. The first amendment protects freedom of religion, speech, press and assembly; the third amendment forbids the quartering of troops; the fourth amendment prohibits unreasonable searches and seizures; the fifth amendment prohibits self-incrimination and the ninth amendment states that the rights enumerated in the Constitution are not to be construed to deny or disparage others retained by the people. For an analysis of the "penumbras" of the ninth amendment, see Griswold v. Connecticut, 381 U.S. 479 (1965) and related law review articles, Kauper, Penumbras, Peripheries, Emanations, Things Fundamental and Things Forgotten: The Griswold Case, 64 MICH. L. REV. 235 (1965); McKay, The Right of Privacy: Emanations and Intimations, 64 MICH. L. REV. 259 (1965), Dixon, supra note 7.
will serve as "a yardstick as accurate as we can make it to tell what is legally private—that is, protectible as a legal right with remedies and sanctions—from what is and must be left legally public—that is, beyond such protections."19

The most quoted definition of privacy is that offered by Professor Warren and Justice Brandeis in their celebrated article of 1890 on the right to privacy at common law. They defined privacy as "the right to be let alone."20 Because this definition has the capacity to be all things to all courts,21 it contains no guidelines that can be translated into applicable rules.22

A definition which provides conceptual boundaries and describes the nature of privacy has recently been proposed.23 It states that privacy is "an autonomy or control over the intimacies of personal identity."24 Thus, prerequisites of autonomy, identity and intimacy are required before a particular activity of one's life may be legally termed and protected as private. Identity can be defined as the flow of information about oneself; autonomy involves the individual's determination of when, how and to what extent this information is communicated to others. Intimacy is the key restriction in this definition of privacy because a legislative or judicial judgment must be made to determine what information is intimate and thus legally private.

The legal community's selection of protected intimacies must be made in light of contemporary societal standards and needs.25 The current pervasive growth of government regulation of private lives26

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20. The full context of their definition is: "[I]n very early times, . . . the 'right to life' served only to protect the subject from battery in its various forms; liberty meant freedom from actual restraint; . . . now the right to life has come to mean the right to enjoy life,—the right to be let alone. . . ." Warren & Brandeis, The Right to Privacy, 4 Harv. L. Rev. 193 (1890).

21. See, e.g., Gerety, supra note 19, at 234.

22. As one authority noted, at the most this definition is "a singularly appealing phrase" that "has charisma." Speech by Hon. Shirley M. Hufstedler, Circuit Judge, U.S. Court of Appeals for the Third Circuit, at the Twenty-Eighth Annual Benjamin N. Cardozo Lecture (New York City, May 11, 1971).

23. Gerety, supra note 19, at 234. His article provides a compendium of privacy definitions and offers a comprehensive analysis of them.

24. Id. at 236.

25. The need for use of contemporary standards is illustrated by the Supreme Court's judgment concerning privacy expectations associated with the use of the telephone. As the use of the telephone evolved from a business luxury to an everyday necessity, the Court's recognition of privacy interests associated with its use also changed. Its position changed from non-recognition in Olmstead v. United States, 277 U.S. 438 (1928), to recognition and protection in Katz v. United States, 389 U.S. 347 (1967).

26. It has been reported that "[f]ederal agencies have 3.8 billion personal records in 6,753
is an example of an alleged societal "need" which must be weighed by the courts against its potential for infringing on an intimate aspect of one's life. Thus, the three concepts of intimacy, identity and autonomy will help limit and focus application of the Katz test of a "reasonable expectation of privacy." Once a decision has been reached as to which activities are intimate, the courts will have charted territory that is legally private and will then be able to protect this area from unreasonable government intrusions.

The Concept of Search

The question whether a particular government activity constitutes a search is an important one to be answered because a fundamental directive of the fourth amendment under Katz is the prohibition against unreasonable invasions of an individual's privacy by the government. The paradoxical complexity of this question is best illustrated by the following metaphor:

[W]e may characterize the zone of privacy as a legal island of personal autonomy in the midst of a sea of public regulation and interaction. Coming ashore, to push this metaphor, is normally forbidden without invitation or good reason. But here the difficulty with the metaphor, and with its concept of autonomy, become apparent: for what besides actual physical intrusion by agents of the state is to constitute a 'coming ashore'?28

Hence, a priori, "unreasonable government intrusion" needs to be defined so that it may be recognized. A definition of search necessarily involves an examination of the terms used in the fourth amendment. By its terms, the fourth amendment protects the right of the people to be secure in their "persons, houses and effects."29 While

categories, from passport applications to Social Security accounts . . . ." This is an average of 18 files per citizen. Time, July 18, 1977 at 17.
27. See Gerety, supra note 19, at 281-82.
28. Id. at 271.
29. U.S. Const. amend. IV:
   The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.
31. One author has aptly expressed this type of "intrusion" in the following terms: "If government officials could enter my home at whim, they would, I fear, often discover an unmade bed, unwashed dishes, and various piles of clothing scattered haphazardly about. Such discoveries may or may not interest them, but I would surely feel exposed and embarrassed. Indeed, I might eventually go so far as to maintain a spotlessly clean home to avoid the potential exposure and embarrassment." Stone, The Scope of the Fourth Amendment: Privacy and the Police Use of Spies, Secret Agents, and Informers, 1976 A.B.F. Res. J. 1193, 1207.
the emphasis is on material possessions rather than privacy, the law has evolved from protection of property to protection of privacy. The benchmark case of Katz expanded the coverage of fourth amendment protection to include reasonable expectations of privacy.

Thus, while the concept of search is easily defined and identified when property interests are involved, it becomes more elusive when privacy interests are jeopardized. An overt intrusion of privacy, such as unrestrained police examination of one's person, can be readily recognized and termed a search. But a subtle intrusion, such as observation of an intimate aspect of one's life, requires reference to substantive definitions of search and privacy.

Courts have defined search as "a probing or exploration for something that is concealed or hidden." An elaboration of this definition is found in Rule 62(c) of the Federal Rules of Criminal Procedure: "Search necessarily implies prying into or uncovering of that which one has a right to and intends to and effectively does conceal from view or scrutiny of another." But this definition neither delineates the scope of fourth amendment protections nor provides standards for the resolution of questions of fourth amendment coverage.

The best definition of search was submitted by Professor Anthony Amsterdam when he stated that "a 'search' is anything that invades interests protected by the [fourth] amendment." While the interests protected by the fourth amendment are not limited to those concerning privacy, a reference to the privacy definition enunciated earlier will identify when a particular governmental investigative activity is a "search" of one's privacy.

33. Amsterdam, supra note 2, at 383.
35. See text accompanying note 24 supra. Other approaches to the concept of search have been offered which advocate that a substratum of governmental investigative activity which falls short of a "full search" be recognized. See, e.g., Peebles, The Uninvited Canine Nose and the Right to Privacy: Some Thoughts on Katz and Dogs, 11 GEOR. L. REV. 75, 93 (1976); Grannelli & Gilligan, Prison Searches and Seizures: "Locking" the Fourth Amendment Out of the Constitution, 62 VA. L. REV. 1045 (1976); Police Use of Remote Camera Systems For Surveillance of Public Streets, 4 COLUM. HUMAN RTS. L. REV. 143 (1972).

Many governmental intrusions have been removed from the realm of judicial control because courts have been unwilling to term certain investigative activity a "search," due to the consequential sanctions imposed by the exclusionary rule. Using this analytical approach, admissibility of evidence would depend largely upon the reasonableness of the officers' conduct, rather than upon the often academic question of whether the activity constituted a search. To determine whether a "full search" or a subsearch has occurred, the individual's expectation of privacy would still be the prime consideration but would simultaneously be weighed against both the degree to which the privacy interest was infringed and the societal need to infringe upon that interest.
A search affecting privacy is forbidden by the fourth amendment if it is "unreasonable." Under Katz, a search conducted without a warrant will be per se unreasonable "subject only to a few specifically established and well-delineated exceptions."36

Therefore, the answer to the question of whether a particular government activity invades privacy interests can be determined by structuring an analysis within the following framework. The individual's interests relevant to the government's activity must first be determined. These interests must then be examined to see if they concern the intimacies of personal identity, and hence are private. If the relevant interests do not meet this test, then the analysis is completed, since the government's activity will not infringe any protected privacy interest and therefore is under no constitutional restraint. If the interests germane to the government's activity are found to be intimate to personal identity, they must be recognized as private. Thus, the government's activity will be constitutionally prohibited without a warrant based on probable cause.

THE USE OF THE ELECTRONIC TRACKING DEVICE AND FOURTH AMENDMENT IMPLICATIONS

Courts have disagreed whether the use of an electronic tracking device is a search within the meaning of the fourth amendment, and whether, under the principles of Katz v. United States, a warrant is required. This conflict also exists among the authorities on electronic surveillance.37

Electronic tracking devices have been used in a variety of circumstances. The devices have been inserted in packages, either with the

This sliding scale approach to defining search finds analogous support in the approach taken by the Supreme Court in Terry v. Ohio, 392 U.S. 1 (1968), Camera v. Municipal Court, 387 U.S. 523 (1967), and Schmerber v. California, 384 U.S. 757 (1966). In each of these cases, the police intrusion was balanced against the need to search. The Court, while assuming a search had occurred, nevertheless upheld the police activity. The search was termed "reasonable," and hence not prohibited by the fourth amendment, despite the fact that no warrants were obtained.

However, it is submitted that use of such a graduated standard, while "easing the strains of the present monolithic model of the fourth amendment" would permit fourth amendment analysis to assume the configuration of "one immense Rorschach blot." Amsterdam, supra note 2, at 393.

37. Professor Blakely and Professor Carr, both members of the United States National Commission for the Review of State Laws Relating to Wiretapping and Electronic Surveillance, have taken opposing positions on the legal status of electronic tracking devices. Professor Blakely advocates use by government agents without the necessity of a warrant, (NWC Report, supra note 9, at 205). Professor Carr would require prior judicial approval before the device could be used (Carr, Electronic Beepers, 4 SEARCH AND SEIZURE LAW REPORT 1, 3 (April, 1977).
consent of the seller\textsuperscript{38} or the owner of the item,\textsuperscript{39} or upon the discovery of contraband during a customs search.\textsuperscript{40} They have been used with baited money taken in a bank robbery\textsuperscript{41} and with items bartered in exchange for contraband.\textsuperscript{42} These devices are most frequently used to track vehicles.\textsuperscript{43}

However used and wherever placed, installed electronic devices, or “beepers” enable investigating officers to locate and keep track of persons and tangible items. Although somewhat obscured in some opinions, analysis of whether use of an electronic beeper involves a search requires consideration of the two distinct acts that are necessary to its successful use: installation and monitoring. These acts present different privacy frameworks depending on the item to which the device is attached. This Note will undertake an examination of the use of the beeper within two separate contexts: the placement of a beeper on an automobile to track its location and movement, and the installation of the device in tangible items.

\section*{Tracking Automobiles}

\textit{The Fifth Circuit Approach}

In \textit{United States v. Holmes}\textsuperscript{44} 1200 pounds of marijuana were seized with the aid of an electronic tracking device. Without obtaining a warrant, government agents magnetically attached a beeper to the exterior of the defendant’s van while the vehicle was parked in a public parking lot. The defendants, charged with conspiracy\textsuperscript{45} and possession with intent to distribute marijuana,\textsuperscript{46} moved to suppress the evidence on the grounds that the warrantless attachment of the device was a search in violation of their fourth amendment rights. Thus all evidence seized from the van would be subject to suppression as “fruit of the poisonous tree.”\textsuperscript{47} The government argued that the installation of the beeper was not a search since an individual cannot have a reasonable expectation of privacy in the exterior of a vehicle parked on a public parking lot. The government further contended that an individual’s movements while driving a

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\bibitem{39} United States v. Emery, 541 F.2d 887 (1st Cir. 1976).
\bibitem{41} United States v. Bishop, 530 F.2d 1156 (5th Cir.), \textit{cert. denied}, 429 U.S. 848 (1976).
\bibitem{42} United States v. Perez, 526 F.2d 859 (5th Cir. 1976).
\bibitem{43} NWC Report, \textit{supra} note 9, at 205.
\bibitem{44} 521 F.2d 859 (5th Cir. 1975) \textit{on rehearing}, 537 F.2d 227 (5th Cir. 1976).
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vehicle on a public road cannot be considered private.

The district court suppressed the evidence, holding that use of the tracking device was a search and was subject to the prohibitions of the fourth amendment. On appeal the Fifth Circuit Court of Appeals affirmed the district court's finding that a search had occurred when the device was attached to the defendant's van.

The court's perception of the problem was crucial to its attempt to create a framework for an analysis of a unique legal issue. Its approach placed less emphasis on the interest to be protected than on the means of violating it. The court quoted Boyd v. United States, stating that "the proper focal point for inquiry is whether the government, [has invaded] an individual's 'right of personal security, personal liberty, and private property' . . . and [whether this intrusion] violates 'the privacy upon which he justifiably relied.'" Purporting to apply this test to the given situation, the Holmes court concluded that an individual has a justifiable expectation of privacy in his motor vehicle even though that vehicle is parked in public or driven on a public highway. The panel further held that this includes the right to expect that the government will not attach an electronic tracking device to his automobile in order to monitor his movements.

Despite the fact that the court had stated that its focal point would be to determine an individual's reasonable privacy expectations, in reality it concentrated on the ramifications of the electronic beeper as a surveillance technique. Thus, the extent of the invasion to the defendant's "security, liberty and property" was not the basis of the decision by the court; rather, the method by which the intrusion occurred was pivotal to its ruling.

The court stressed that the beeper is not a surveillance method of limited time, scope and duration. The clandestine nature of the device also disturbed the court. Most importantly, the court believed that judicial approval of the warrantless use of beepers would grant license to government agents to break into trunks or glove compartments of vehicles or implant the device on one's person. The court summarized its view of the use of the tracking device by calling it "obnoxious and repulsive."

Because this was a search and seizure case of "exceptional im-

48. 521 F.2d at 863.
49. Id. at 864.
50. 116 U.S. 616, 630 (1886).
51. 521 F.2d at 865.
52. Id. at 866.
53. Id.
portance"a rehearing en banc was granted. The Fifth Circuit, by an evenly divided vote, affirmed the lower court's decision that an illegal search had occurred when the beeper was installed on the defendant's van. A lengthy dissent was submitted.

The dissent focused on whether an exception to the warrant requirement was appropriate in this particular situation. Unlike the appellate court's analysis, the dissent framed the crucial issue to be whether the use of the beeper was reasonable under the circumstances, rather than whether a search had occurred under the Katz test.

The dissent concluded that there had not been an illegal search. Since probable cause was established by "unusually strong facts," the use of the beeper was justified. Finding exigent circumstances, the dissent went one step further, and argued that the warrantless use of the beeper was reasonable in this situation since the intrusion was minimal. The dissent stated that an individual should have a lesser expectation of privacy in a motor vehicle operated in public because "[a] car has little capacity for escaping public scrutiny. It travels public thoroughfares where its occupants and its contents are in plain view." The dissent did not delineate what "degree" a "lesser expectation" of privacy involved. It left open the question whether any reasonable expectation of privacy had been infringed by the attachment of the beeper to the vehicle.

The Ninth Circuit Approach

The Ninth Circuit addressed the issue in United States v. Hufford. In Hufford, an electronic tracking device was installed in a drum of caffeine that one of the defendants had legally purchased from a chemical company and placed in his pickup truck. It enabled state agents to trace the movements of the truck to a rental garage, where pursuant to a warrant, a second beeper was attached to the battery of the defendant's truck. With the aid of the second beeper, the agents were able to locate the truck when it was later moved to a house. A warrant to search the garage was obtained and the agents seized paraphernalia used in amphetamine manufacture. The de-

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54. 537 F.2d 227, 228 (5th Cir. 1976).
55. 525 F.2d 1364 (5th Cir. 1976).
56. 537 F.2d 227 (5th Cir. 1976).
57. Id. at 228.
58. Id. at 229.
fendants moved to suppress this evidence and to quash the search warrant, contending that the agents invaded constitutionally protected areas of privacy without securing a search warrant. The government countered that the installation of the beeper in the drum constituted neither a search nor a seizure under the fourth amendment since the driver of the truck could have no reasonable expectation of privacy while traveling on public roads.

The district court held that the placement of the beeper on the drum was a search.60 Even though the defendant’s expectation of privacy in his movements while driving on public roads was arguably minimal,61 this expectation still constituted a protected right which the court would “not allow the government to ride roughshod over.”62 The court found that the government had contradicted its rationale for the warrantless installation of the first beeper in the drum, when it sought court orders for the second beeper’s installation.

On appeal, the Ninth Circuit sustained the government’s contention that there had not been a search under the fourth amendment since the defendant did not have any reasonable expectation of privacy regarding his location while traveling on a public road.63 The court considered the installation of the beeper to be a “probing exploratory quest for evidence” but emphasized that the beeper is a device which “only augments that which can be done by visual surveillance alone.”64 Therefore, the court concluded that there was “no distinction between visual surveillance and the use of an electronic beeper [under these circumstances] . . . provided no Fourth Amendment violation occurred when the beeper was attached.”65 In this court’s view, the government had not contradicted itself when it sought a warrant for the installation of the second beeper on the defendant’s truck. The warrant was a necessary prerequisite for the beeper’s installation as the defendant’s reasonable expectation of privacy would have been violated if the agents had entered the garage and opened the truck’s hood to plant the beeper on the battery without a warrant.

In sum, the Ninth Circuit focused on whether any reasonable privacy interest had been violated when a beeper was used without

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61. Id. The court did not elucidate why the defendant should have had even a minimal privacy expectation.
62. Id.
63. 539 F.2d 32, 33 (9th Cir. 1976).
64. Id. at 33, 34.
65. Id. at 34.
a warrant. Use of an electronic tracking device as a surveillance method was not the key to its analysis. Rather, the court examined the limited nature of the information conveyed by the beeper and determined that knowledge of one's movement and location while traveling on public roads was not something one could reasonably expect to remain private. The beeper is merely an "appropriate sophisticated device to aid in a lawful surveillance . . . ." 68

The Eighth Circuit's Analysis

In United States v. Frazier 67 the Eighth Circuit avoided deciding whether warrantless installation of a beeper on an automobile constitutes a search. In this case, FBI agents were investigating an ongoing extortion scheme. Time was of the essence in setting up a continuous surveillance as the identity of the victim was only determined the night before the attempted extortion was to be executed. The scheme involved placing an explosive belt on the victim. Consequently, FBI agents decided that immediate and warrantless installation on the defendant's automobile to trace his movements was essential. The court characterized this action as a search without further discussion of the issue. However, the search was termed "reasonable" because the installation was justified by probable cause and exigent circumstances.

Noting that the issue of whether an illegal search had occurred presented a "difficult question," 68 the court determined that "[a]t a minimum, the attachment of such a device, without consent or judicial authorization, is an actual trespass." 69 It also expressed concern that approving the warrantless attachment of the beeper would encourage indiscriminate planting of tracking devices on cars. 70 In a concurring opinion, Judge Ross approved the placement of the beeper using the same rationale found in United States v. Hufford. 71 He found the case similar to Cardwell v. Lewis 72 where a plurality of the Supreme Court held that taking paint scrapings from the exterior of vehicles in public parking lots did not infringe reasonable expectations of privacy. Judge Ross urged that the issue of warrantless attachment of beepers should have been squarely addressed by the court, as the issue was an important and recurring

66. Id.
67. 538 F.2d 1322 (8th Cir. 1976).
68. Id. at 1324.
69. Id.
70. Id.
71. 539 F.2d 32 (9th Cir. 1976).
one. He emphasized the need to give direction to district courts, prosecutors and law enforcement authorities.

The Need for Direction

The need for direction is aptly demonstrated by the divergent paths taken by the courts in their efforts to frame and resolve the issue of the constitutionality of warrantless use of beepers by government agents. In most cases, courts characterize warrantless installation as a search without considering whether privacy interests are infringed by this police activity.\(^7\) A case in point is United States v. Bobisink,\(^7\) where the district court structured a "future shock" framework that closely parallels the approach taken by the court in United States v. Holmes.\(^5\) While not calling the device "obnoxious and repulsive," it viewed the beeper as a conceivable "prelude to sanctioning a '1984' network of such beepers connected to a master monitoring station which would keep track of each of our movements for the benefit of the powers that be."\(^7\)

This decision is particularly notable for its lack of legal foundation. Legal assumptions, which form the backbone of its decision, were made without reference to any legal authority.

The better reasoned approach to the resolution of the dilemma was taken by the Ninth Circuit in United States v. Hufford.\(^7\) The conceptual approach framed by the court was the same as the model proposed by this Note.\(^7\) The court focused initially on the privacy interests relevant to the attachment and monitoring of beepers on automobiles. The court found that the interest or information involved was a person's location and movement while driving a vehicle on public roads. The court then concluded that it was unreasonable to expect such information to be private. Had the court utilized the privacy definition discussed earlier,\(^7\) it could have stated the same conclusion by saying one's location and movement while traveling on public highways are not interests intimate to personal identity. The court then examined the beeper as a surveillance technique and found that it would only provide a more efficient method to obtain

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75. 521 F.2d 859 (5th Cir. 1975).
76. Id. See also United States v. Pretzinger, 542 F.2d 517 (9th Cir. 1976) for a further elaboration of this holding.
77. 539 F.2d 32 (9th Cir. 1976).
78. See text accompanying note 24 supra.
79. Id.
information about a non-private aspect of an individual's life. By approving the warrantless use of the beeper in this case, the court emphasized that it would not grant carte blanche approval of all warrantless beeper installations. Rather, their approach would mandate a finding that a search had occurred whenever reasonable privacy expectations had been infringed by installation of the device.

The court's conclusion that protected privacy interests do not exist when a person is traveling in his vehicle on public highways is well supported by case law and logic. There is a legally recognized lack of privacy while traveling in motor vehicles on public highways. The halting and inspection of vehicles to regulate traffic and enforce speeding, vehicle, and driving laws must be expected while traveling. Indeed, pedestrians have a more reasonable expectation of unobserved movement.

Thus, there is no legitimate expectation of privacy on public highways where a car is publicly visible for anyone's observation. This is consistent with the view espoused in Katz that "[w]hat a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection." In an automobile, one is surrounded by glass that allows visual surveillance by all who care to look. Police officers are allowed—indeed they are expected—to patrol and observe what transpires in these areas visible to the public.

Mere observation is not a search, and the fact that the information is acquired through mechanically assisted investigation is a distinction without a difference. Plain view observation with sense-
enhancing aids has been upheld consistently by the courts. The only time use of these aids transform the observation into a search is when there could be no actual "plain" view of the observed object without the aid of a sense-enhancing device.

The conclusion reached in *Holmes* that an individual has a right to expect that the government will not attach a beeper to his vehicle to trace his movements is without merit. Warrantless attachment of electronic beepers involves no greater intrusion than that involved in physical surveillance by the police. Simply because the government uses a more sophisticated device to aid it in its lawful activity does not enlarge an individual's privacy rights. At most it is a technical trespass. The constitutional implications of this kind of trespass to the exterior of automobiles is underscored by two recent Supreme Court decisions. *South Dakota v. Opperman* validated police inventory of the contents of impounded vehicles. In *Cardwell v. Lewis* the Court held that taking paint scrapings from cars was not a search. In accordance with these holdings, two federal circuit courts have held that opening car doors to ascertain the vehicle identification numbers is not a search. It follows from these decisions that the magnetic attachment of a beeper to the exterior of automobiles is constitutionally insignificant.

The *Holmes* and *Bobisink* decisions were in large measure grounded on the fear that approval of warrantless installation of beepers would lead to other, more objectionable, practices. The courts emphasized that such activity could become a prelude to implanting beepers on clothing or hiding agents in automobile trunks. However, these fears are without legal foundation and are not a proper basis on which to rest a decision. There is a significant difference between the privacy reasonably associated with the exterior of automobiles and the privacy related to one's person or one's locked car trunk. Several courts have held that the trunk is the area of a vehicle in which one has the greatest actual expectation of privacy. Although "plainly visible" portions of the car may be searched without a warrant under a variety of situations, independent justification has consistently been required before a trunk may

86. *See Annot.*, 48 A.L.R.3d 1178 (1973) for a comprehensive survey.
be searched. Further, planting a beeper on a person's clothing would clearly violate the right to bodily privacy.

It is also contended that the continuous surveillance aspect of the beeper is a factor which should weigh heavily in the decision of its legal status. The assertion in *Holmes* that the beeper is a device of unlimited time, scope and duration is inaccurate. The batteries in a beeper have a limited life and the scope of the device's function is limited to tracking the location of objects. No further information can be obtained since the device is non-aural and merely replaces the "eyes" of the police in a more efficient manner.

91. See United States v. Lawson, 487 F.2d 468 (8th Cir. 1973), where the court held that if the only justification for the search of the car was the bare police custody of the car, the seizure of a gun from the locked trunk of the car was improper. Although the Supreme Court in *South Dakota v. Opperman*, 428 U.S. 364 (1976), held that the securing of the contents of a lawfully impounded motor vehicle did not constitute a search, it is unlikely that this holding will be expanded in the future to cover police entry into a locked glove compartment or trunk. Opening a locked portion of a vehicle in police custody would not serve any police caretaking function nor any self-protection function. See Hermann, *Inventory Searches of Vehicles*, 3 *SEARCH AND SEIZURE LAW REPORT* 1-3 (1976). See also *Barrentine v. United States*, 434 F.2d 636 (9th Cir. 1970) (search of trunk of car where defendant was arrested for drunk driving held invalid); and *People v. Super. Ct. In And For Los Angeles Cty.*, 63 Cal. App.3d 990, 134 Cal. Rptr. 174 (1976) (trunk of automobile recognized as an area of a vehicle as to which there is greatest expectation of privacy, hence independent justification required before trunk may be searched).


93. The inaccuracy of this conclusion is demonstrated by an understanding of the mechanical components and function of the electronic beeper. An electronic tracking device utilizes radio direction finding (RDF) in providing covert tracking of vehicles and cargo. A radio receiver and a beacon transmitter are required for the tracking operation. The placement of a beacon transmitter on the target vehicle or in cargo containers is required. The beacon will emit periodic signals (radio frequency "tone bursts") to be received by a radio receiver tuned to its frequency. The location of the tracked object is established by the audible tone picked up by the receiver and/or a left-right needle indicator which points the way to the target and indicates its relative motion to the operator of the receiver.

The beacon transmitter units commonly measure 2 x 5 x 3 inches including battery pack. They have an average signal output of 50 milliwatts to one watt and operate, depending upon the duty cycle or frequency of signal transmission, for 10 to 100 hours.

The range of the "bumper beeper" depends on the environment in which it is used. In an open environment the surface-to-surface range is one to three miles; in the center city environment where much radio frequency shielding is encountered, the range may be only a few city blocks. Surface-to-air ranges of 50 to 100 miles are possible if no radio frequency shielding inhibits the beacon transmission or the tracking aircraft's reception.

Proficient use of the electronic tracking system is directly related to operator skill and experience. Performance and quality substantially degrades when the system is used in a high-rise city environment. Multiple signal reflections from buildings and the constantly changing propagation paths between the tracked and the tracking vehicle can reduce the usefulness of the device to virtually nil. Thus, a fair reading of the above data leads to the conclusion that the electronic beeper is a device of limited time, scope and duration. See generally *NWC Report*, supra note 9, at 204-05.

94. Even this analogy is not technically correct. A police officer's eyes have a much greater capacity for surveillance, i.e., through visual surveillance an officer can later identify the tracked person. He can also "observe" conversations. See generally note 93 supra.
Finally, any possible abuse of beepers is limited. Just as physical surveillance, while normally of unquestioned legality, 5 may become harassment, it is possible that indiscriminate use of beepers could involve the same elements of harassment. When unaided surveillance becomes harassment, courts grant injunctive relief. 6 The same relief from indiscriminate use of beepers also would be available. Another conceivable remedy is recovery of damages from government agents who violate fourth amendment rights. 7

**Installation of Electronic Bepers Within Tangible Items**

In automobile attachment cases, the method of beeper installation is critical to constitutional considerations because monitoring itself does not infringe privacy interests. 8 The same is not necessarily true when the beeper is placed within personal property. When a beeper is implanted inside an object and that object is subsequently taken inside a home by the individual under investigation, the device enables the government to acquire information not otherwise publicly available. The use of the beeper as a “Trojan horse” reveals location and movement which an individual can reasonably expect to be “hidden” or sheltered by his home. The device also allows government agents to know when a subject opens a tracked object. 9 It is this penetration power of the Trojan horse beeper which makes the monitoring of the device the “more significant judicially cognizable event.” 10

The Trojan horse beeper is a more dangerous threat to privacy interests than any comparable sense-enhancing device because the mere drawing of one’s drapes can effectively counter any artificial visual amplification device; there is no available defense against Trojan horse intrusions. Indeed, even a fortress of visual protection, a windowless home, situated on an extensive area of land and surrounded by high fences 11 would fall

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95. There has been no litigation in this area.
96. See Giancana v. Johnson, 335 F.2d 366, 370 (7th Cir. 1964) (Swygert, J., dissenting) and Galella v. Onassis, 487 F.2d 986 (2d Cir. 1973).
98. See text accompanying note 78 supra.
99. See United States v. Emery, 541 F.2d 887, 888 (1st Cir. 1976). In this case it was explained that the signal which the beeper emitted would be altered when the tracked package was opened.
to a Trojan horse invasion. Thus, the sanctum sanctorum of fourth amendment privacy protection might be violated by warrantless use of Trojan horse beepers. However, courts could decide that the information acquired by this device is non-private and that the sheltering of this information within a home does not transform it into a privacy interest, since location and movement alone are not intimate nor concerned with personal identity. If this were the case, monitoring a Trojan horse beeper would not be a search for fourth amendment purposes. However, the issue is unresolved and awaits judicial determination.

Even though monitoring Trojan horse beepers is the "more significant judicially cognizable event," the act of installation cannot be ignored. All courts have agreed that the placing of a beeper inside a vehicle or a closed package is a search. This activity encompasses a classic search definition, i.e., "a prying into of that which one has a right to and intends to conceal from view or scrutiny of another." However, if the tracked object is contraband or an item used in criminal activity, installation in these items presents no constitutional problems, as an individual can have no property or privacy interests in contraband. Since the government can "absolutely seize the contraband, the lesser act of inserting the tracking devices must necessarily be permissible." Likewise, when a beeper is placed inside movable property constituting a part of illegal transactions, no privacy interests can be invaded because there can be no reasonable expectation of privacy concerning items illegally acquired.

CONCLUSION

A dichotomy exists in the legal status of warrantless use of electronic tracking devices by government agents because courts have not been able to consistently articulate and address the relevant privacy considerations. This Note has proposed an analytical framework to resolve this conflict that utilizes viable definitions of privacy and search. The individual interests relevant to the installation and

104. FED. R. CRIM. P. 62(c).
105. See Leary v. United States, 544 F.2d 1266 (5th Cir. 1977) and United States v. Drotar, 416 F.2d 914 (5th Cir. 1969). The courts rejected the contention that private possession of contraband drugs was protected by the same right of privacy which permitted adults to examine pornography in private. Stanley v. Georgia, 394 U.S. 557 (1969).
monitoring of electronic beepers must be examined to determine if these interests are private. If these interests cannot be judicially recognized as intimate to personal identity, then use of the electronic beeper is constitutionally permissible.

When the electronic beeper is used to track vehicles, the relevant individual interests are the location and movement of the tracked subject while traveling public highways. These interests or information are not private since they are not germane to the intimacies of personal identity. Hence, use of the beeper to track automobiles should not be considered a search. When this device is used as a Trojan horse to enable government agents to acquire information not publicly available, the question of the intimacy of the information acquired must be judicially resolved.

Kara L. Cook