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United States v. Robinson: Has Robinson Killed the Katz?: The Eleventh Circuit Concludes That Warrantless Thermal Surveillance of a Home Does Not Constitute a Search Under the Fourth Amendment

I. INTRODUCTION

"The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated." The purpose of the Fourth Amendment was to serve as a safeguard for the people against government intrusion; however, the recent decision in United States v. Robinson illustrates how courts have taken the bite out of this covenant, reducing it to mere rhetoric. The court in Robinson held that a warrantless aerial surveillance of an occupied, private residence with infrared thermal detection is a constitutional search. This decision marks the culmination of decisions formulating bad law from within the Eleventh Circuit and from other circuits as well.

This Casenote contends that the Robinson court has taken a ride down the proverbial slippery slope and has reached rock bottom.

1. U.S. Const. amend. IV.
2. See id.
3. See United States v. Robinson, 62 F.3d 1325 (11th Cir. 1995). Over the past three decades courts have gradually chipped away at the Fourth Amendment's armor in pursuit of affording the government more flexibility in its fight against crime. See, e.g., Scott E. Sundby, "Everyman's Fourth Amendment: Privacy or Mutual Trust Between Government and Citizen, 94 Colum. L. Rev. 1751 (1994) (explaining dilution of Fourth Amendment).
4. Robinson, 62 F.3d at 1330.
5. In addition to an Eleventh Circuit case three other circuits, have held that warrantless thermal surveillance is not violative of the Fourth Amendment. See United States v. Ishmael, 48 F.3d 850 (5th Cir. 1995); United States v. Meyers, 46 F.3d 668 (7th Cir. 1995); United States v. Ford, 34 F.3d 992 (11th Cir. 1994); United States v. Pinson, 24 F.3d 1056 (8th Cir. 1994).
Through its logic and interpretation of the law, the Eleventh Circuit has furnished the government with new and powerful ammunition for its fight towards free reign into the private lives of citizens. Part II of this Casenote discusses the facts of United States v. Robinson; Part III traces the development of relevant Fourth Amendment case law; and Part IV analyzes the Robinson court's rationale.

II. Facts

In December, 1991, Agent Charles West of the Narcotics Division of the Alabama Department of Public Safety was informed that numerous high-pressure, sodium lights had been shipped from California to Theodore Robinson, Sr.'s address in Tuskegee, Alabama. West's investigation revealed that Robinson had ordered similar equipment in 1989 and 1990. Subsequently, West subpoenaed utility records which showed that the defendant's house had a higher electrical consumption than houses of comparable size. Additionally, Agent West noticed that Robinson owned an attractive house with a swimming pool, yet the Alabama Department of Revenue had no record of Robinson's having filed income tax returns.

"After collecting this information, Agent West directed a helicopter crew to conduct a Forward Looking Infrared Receiver ("FLIR"), thermal imaging examination to compare the heat emanating from Robinson's home with the intensity of heat from surrounding objects." The level of heat emitted from Robinson's was consistent with the level of heat generated by indoor hydroponics equipment. After gathering this information, Agent West applied for a search warrant of Robinson's home.

6. In Part IV-(A), this Casenote will discuss the court's implication that individuals must make themselves aware of new technology and take affirmative measures to combat the use of highly advanced equipment in order to preserve their Fourth Amendment rights. See Robinson, 62 F.3d at 1329.
7. See id. at 1327.
8. See id.
9. See id.
10. See id. These facts are more relevant to the collateral issue in this case of whether probable cause existed to search the defendant's home. See id. at 1331.
11. Thermal imagers detect the heat emanating from the targeted object as frequencies within the infrared spectrum. This heat, which is imperceivable by the unaided eye, is then displayed as an image on a screen. The device highlights manmade sources of heat as a white color and cooler temperatures as a shade of gray. See State v. Young, 867 P.2d 593, 595 (Wash. 1994).
12. Robinson, 62 F.3d at 1327.
13. See id. This fact is interesting as it indicates that the FLIR was used on numerous houses throughout Robinson's neighborhood.
14. See id.
search warrant and found an indoor marijuana growing operation. Robinson was charged in the Middle District of Alabama with the manufacture and possession of marijuana with intent to distribute. "Robinson moved to suppress the marijuana seized from his home pursuant to the search warrant [however,] following a suppression hearing, the district court denied his motion." Robinson pled guilty and received a sentence of 130 months in prison, followed by seven years of supervised release.

On appeal, Robinson argued that the FLIR search of his house constituted an illegal search under the Fourth Amendment. The United States Court of Appeals for the Eleventh Circuit affirmed the district court's decision and held that "aerial surveillance of an occupied, private residence with infrared thermal detection as an indication that marijuana is being cultivated inside is [not] an unconstitutional search." This holding was based on the court's conclusions that Robinson did not have a subjective expectation of privacy in the heat emanating from his house, and, even if he did have a subjective expectation of privacy, this expectation is not one that society is ready to recognize as an objectively reasonable expectation.

III. RELEVANT FOURTH AMENDMENT HISTORY

Like most courts faced with the issue of whether a Fourth Amendment search has occurred, the Robinson court begins its analysis by discussing Katz v. United States. While Katz and its progeny still control modern jurisprudence concerning Fourth Amendment searches, it is useful to recognize the development of law leading up to the Katz decision. This Casenote contends that the Robinson court has incorporated into its decision language and rationale found in pre-Katz decisions, thereby initiating a process which may take the Eleventh Circuit full-circle and return Fourth Amendment jurisprudence to a pre-Katz paradigm.

Originally, courts utilized property law concepts to interpret the

15. See id.
16. See id. at 1328.
17. See id.
18. Id.
19. See id.
20. See id. Robinson also contended that there were insufficient facts for probable cause to issue the warrant to search his house. See id.
21. Id. at 1327.
22. See id. at 1329-30.
23. Id. at 1328.
25. This phenomenon illustrates not only the recent trend towards crime control, but it also
scope of the Fourth Amendment. In 1928 The Supreme Court held in *Olmstead v. United States* that messages passing over telephone wires were not within the Fourth Amendment’s protection against unreasonable search and seizure.\(^{26}\) The *Olmstead* Court held that since the wiretap had been placed on wires outside the defendant’s premises, no Fourth Amendment violation occurred.\(^{27}\) In other words, the Fourth Amendment could only be violated by an actual physical invasion of the defendant’s property.\(^{28}\) Furthermore, the Court held that the Fourth Amendment applied only to “places” and “things;” and since the tap intercepted only intangible conversations, a Fourth Amendment violation did not occur.\(^{29}\)

This “trespass equals search” analysis was reiterated in *Goldman v. United States*.\(^{30}\) In *Goldman*, the Court held that a microphone placed against the outer wall of a private office was not a physical trespass, and that therefore no Fourth Amendment violation could have occurred.\(^{31}\) Ten years later, in *On Lee v. United States*, the Court again relied on a physical trespass analysis.\(^{32}\) The Court held that a search did not occur when the police overheard conversations through the use of a “bug” on an undercover agent where the agent had been invited onto the defendant’s property because no trespass had occurred.\(^{33}\)

In 1961, the Court in *Silverman v. United States* held that electronic surveillance accomplished through physical trespass violated the Fourth Amendment, despite the fact that intangible conversations, not specifically “places” or “things,” were involved.\(^{34}\) This decision did not eliminate the physical trespass analysis set forth in *Olmstead*.\(^{35}\) However, the Court held that an individual’s Fourth Amendment rights depended on the tenuous distinction between a “spike mike” which penetrates a wall\(^{36}\) and a microphone placed on the outside of a wall.\(^{37}\) In his concurrence in *Silverman*, Justice Douglas argued that “the depth of the penetration suggests that modern technology has outgrown the limits set forth in *Katz* concerning governmental intrusion into private lives. See id.

\(^{26}\) *Olmstead v. United States*, 277 U.S. 438, 466 (1928).
\(^{27}\) Id.
\(^{28}\) See id.
\(^{29}\) Id. at 464.
\(^{31}\) Id. at 134.
\(^{33}\) Id. at 751-52.
\(^{34}\) *Silverman v. United States*, 365 U.S. 505, 512 (1961). To listen to the defendant in that case, the police inserted a “spike mike” under the baseboard of a wall until it touched a heating duct which ran throughout the defendant’s home. Id at 506.
\(^{35}\) *Olmstead*, 277 U.S. at 466.
\(^{36}\) See *Silverman*, 365 U.S. at 512.
\(^{37}\) See *Goldman*, 316 at 134.
of the electronic device . . . is not the measure of the injury. Our concern should not be with the trivialities of the local law of trespass.”

Six years later, in *Katz*, the Supreme Court expressly overruled *Olmstead* and *Goldman*. The Court held that a warrantless electronic eavesdropping is an illegal search and seizure, even though no physical trespass onto the speaker’s property occurs, and even though it involves only intangible conversations. In *Katz*, the defendant was convicted of illegally transmitting wagering information via telephone from Los Angeles to Miami to Boston. At his trial, tapes of his conversations, recorded by a device attached to the outside of a public telephone booth by FBI agents, were admitted into evidence. No physical intrusion into the booth occurred. The majority reasoned that even though the defendant did not take every precaution against electronic eavesdropping, Fourth Amendment protections must be afforded to a person who justifiably relies upon the privacy of a particular place, be that a home, office, car, or telephone booth.

In contrast, Justice Harlan’s concurring opinion suggested a two-pronged test for determining whether a person is afforded Fourth Amendment protections in a particular situation. This test required “first that a person have exhibited an actual (subjective) expectation of privacy and, second, that the expectation be one that society is prepared to recognize as ‘reasonable.’” This test has become the first step in analyzing Fourth Amendment surveillance cases. However, while the test itself is unchanging, its application by various courts has been anything but uniform.

IV. THE ROBINSON COURT’S ANALYSIS

The Robinson court begins its discussion, ironically, by reciting the Fourth Amendment. The court then states that in *Ford* “we held that the ground surveillance of an unoccupied mobile home on leased land with a thermal infrared heat detector did not violate the Fourth Amendment.” Next, the Robinson court cites three cases from three different
circuits which have also concluded that the use of thermal infrared surveillance or FLIR does not constitute an unconstitutional search.\textsuperscript{49} This Casenote contends that the warrantless use of thermal imagery is always a violation of a person's Fourth Amendment rights. Moreover, because the facts in \textit{Robinson} are unique, by applying the holdings of these other cases, the \textit{Robinson} court has further eroded the Fourth Amendment by both applying and misapplying unsound law.\textsuperscript{50}

The \textit{Robinson} court begins its analysis by noting that the \textit{Katz} test requires that a party alleging an unconstitutional search under the Fourth Amendment must establish both a subjective and an objective expectation of privacy to succeed.\textsuperscript{51} In addition, the court noted that it must determine whether Robinson had a subjective expectation of privacy that society would recognize as objectively reasonable.\textsuperscript{52} The \textit{Robinson} court begins its analysis by focusing on Robinson's subjective expectation of privacy.\textsuperscript{53}

\textbf{A. Subjective Expectation of Privacy}

The \textit{Robinson} court concedes that previously in \textit{Ford}, the court's conclusion that the defendant-appellant held no subjective expectation of privacy "turned on his purposefully venting the heat from his marijuana cultivation inside the mobile home with an electric blower through holes drilled in the floor."\textsuperscript{54} Unlike Ford, Robinson did not vent heat from his marijuana growing operation, nor did he "deliberately assist the emission of heat in any way."\textsuperscript{55} Furthermore, in all of the other cases used by the \textit{Robinson} court to support its holding, the defendant-appellant

\textsuperscript{49} See \textit{Robinson}, 62 F.3d at 1328; United States v. Ishmael, 48 F.3d 850 (5th Cir. 1995); United States v. Myers, 46 F.3d 668 (7th Cir. 1995); United States v. Pinson, 24 F.3d 1056 (8th Cir. 1994).

\textsuperscript{50} See \textit{Robinson}, 62 F.3d at 1327; \textit{Ishmael}, 48 F.3d at 851; \textit{Myers}, 46 F.3d at 669; \textit{Ford}, 34 F.3d at 993; \textit{Pinson}, 24 F.3d 1056, 1058. Unsound law is often the result of applying holdings to cases where the facts are similar but distinguishable. \textit{Stare decisis} is a necessary doctrine which helps provide stability and guidance to our legal system. However, each case has facts unique to itself, and courts must be wary in their use of precedent. Like the childhood game "telephone," the holdings of cases change one fact at a time. Eventually, the original holding will evolve into an entirely new animal. When this new animal rears its ugly face, protected under the province of \textit{stare decisis}, a long and painstaking process is often required to rid the legal system of the monster it created.

\textsuperscript{51} \textit{Robinson}, 62 F.3d at 1328 (citing United States v. Ford, 34 F.3d 992, 995 (11th Cir. 1994) (citing \textit{Katz}, 389 U.S. at 361) (Harlan, J., concurring)).

\textsuperscript{52} Id. at 1328.

\textsuperscript{53} Id.

\textsuperscript{54} Id.

\textsuperscript{55} Id. (emphasis omitted). Also, the \textit{Ford} court never characterized the targeted property as a "home." However, in \textit{Robinson}, it is clear that the targeted structure was indeed a "home." The issue of an individual's expectation of privacy in the home is discussed in Part IV-(B).
deliberately vented the heat.  

In Myers, the court stated that Myers did not have a subjective expectation of privacy in the heat emitted because Myers purposefully discharged the heat from his home through vents on his roof. The Myers court also cited Ford to support its conclusion concerning the vented heat.  

In Pinson, where the heat was deliberately vented, the court failed to decide whether the appellant-defendant had a subjective expectation of privacy. Instead, the court stated that “[a]ny subjective expectation of privacy Pinson may have had in the heat radiated from his house is not one that society is prepared to recognize as ‘reasonable.’” Therefore, the decision in Pinson lends no support to the subjective expectation analysis in the Robinson decision. Moreover, in Pinson, where the heat was voluntarily vented, the court still did not rule out the fact that the defendant-appellant may indeed have had a subjective expectation of privacy in the heat. 

Finally, in Ishmael, the court held that the defendants-appellees had a subjective expectation of privacy even though the Ishmaels had deliberately vented the heat through an exhaust fan that ran continuously. Nonetheless, the court reasoned that “[t]hough the Ishmaels did not—indeed, could not—take every precaution against the detection of the hydroponics laboratory, the balance of the evidence demonstrates that the Ishmaels exhibited a subjective expectation of privacy.” 

An analysis of the four cases cited by the Robinson court to support its general holding reveals that all of these cases involved a defendant who intentionally vented the heat. Consequently, the Robinson court must address “whether inaction can be as revealing regarding the subjective expectation of privacy as action.” The court then phrases the issue as whether Robinson had a subjective expectation of privacy in the heat.

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56. See United States v. Ishmael, 48 F.3d 850, 851 (5th Cir. 1995); United States v. Myers, 46 F.3d 668, 669 (7th Cir. 1995); United States v. Pinson, 24 F.3d 1056, 1058 (8th Cir. 1994).
57. Myers, 46 F.3d at 669.
58. Id.
59. Pinson, 24 F.3d at 1058-59.
60. Id. at 1059.
61. Id. at 1058-59.
62. Ishmael, 48 F.3d at 854-55. Furthermore, the structure at issue was not a home but was a large steel building located in an open field. The issue of an individual’s expectation of privacy in the home is discussed in Part IV-(B).
63. Id.
64. United States v. Ishmael, 48 F.3d 850, 851 (5th Cir. 1995); United States v. Myers, 46 F.3d 668, 669 (7th Cir. 1995); United States v. Ford, 34 F.3d 992, 993 (11th Cir. 1994); United States v. Pinson, 24 F.3d 1056, 1058 (8th Cir. 1994).
65. Robinson, 62 F.3d at 1328.
generated by his indoor marijuana cultivation.\textsuperscript{66}

In finding that Robinson did not have a subjective expectation of privacy, the court errs in two ways.\textsuperscript{67} First, the court reasons that it must look only at Robinson's subjective expectation of privacy in the emitted heat.\textsuperscript{68} The court explicitly rejects the "balance of the evidence" rationale offered in \textit{Ishmael} which suggests that a court must also take into consideration a person's subjective expectation in the activities associated with the resulting heat emissions.\textsuperscript{69} Instead, the \textit{Robinson} court opines that because the FLIR measures only the emitted heat, the sole issue is whether Robinson had a subjective expectation of privacy in the emitted heat, described as nothing more than a byproduct.\textsuperscript{70} Second, the court states that "Robinson's inaction regarding the heat generated from his marijuana cultivation demonstrates his lack of concern for it" thus, concluding that Robinson did not establish a subjective expectation of privacy in the heat emitted from his home.\textsuperscript{71}

By limiting the scope of its analysis to the emitted heat,\textsuperscript{72} the \textit{Robinson} court fails to acknowledge the defendant's full expectation of privacy. The issue is not only the heat, but more importantly, the activity revealed by the heat. In ignoring this point, the \textit{Robinson} court fails to recognize that the heat and the activity generating the heat are inextricably intertwined.

This concept, that heat emissions and the heat-generating activity cannot be severed from one another, is illustrated by the \textit{Ishmael} record.\textsuperscript{73} In \textit{Ishmael}, a Drug Enforcement Administration ("DEA") officer used a thermal imager to record heat emanating from the defendant's steel building.\textsuperscript{74} The officer "displayed his recordings to two DEA thermographers, both of whom concluded that the Ishmaels were illegally cultivating marijuana in the steel building's structure."\textsuperscript{75} The thermal imagery process is similar to the use of an X-ray machine because it allows the operator to "see" through walls and obtain information about activities occurring inside a house at the moment the imager is being used.\textsuperscript{76}

\textsuperscript{66} Id.
\textsuperscript{67} See id.
\textsuperscript{68} See id.
\textsuperscript{69} Id. at 1328-29 n.4 (citing United States v. Ishmael, 48 F.3d 850, 854 (5th Cir. 1995)).
\textsuperscript{70} Id. at 1329.
\textsuperscript{71} Id.
\textsuperscript{72} Id. at 1328.
\textsuperscript{73} Ishmael, 48 F.3d at 852.
\textsuperscript{74} Id.
\textsuperscript{75} Id.
\textsuperscript{76} The \textit{Robinson} court nevertheless argued that thermal imagery is not the equivalent of an X-ray machine. \textit{Robinson}, 62 F.3d at 1330.
An individual has a subjective expectation of privacy not only in the emitted heat, but also in the activity creating the heat because it is the activity which is ultimately revealed to the operator of a thermal imager. For example, in Katz, the Court’s analysis was not limited to the vibrations on the glass panels of the telephone booth created by the noises emanating from the defendant’s vocal chords, but instead focused on the resulting word formations. The Supreme Court in Katz did not dwell upon these physical minutiae, but, rather, recognized that the Fourth Amendment broadly protects from government intrusion that which a person reasonably seeks to keep private.

The Robinson court’s failure to take into account the activity revealed by the heat is understandable, however, inexcusable. It is difficult to fully understand the limits of modern technology. However, in a Fourth Amendment analysis, just as vibrations made by vocal chords cannot be severed from the words they form, and just as electronic pulses originating from computers, faxes and modems cannot be severed from the messages they ultimately form, heat signatures cannot be severed from the activities they ultimately reveal. While it is true that an inference must be made in order to attach heat signatures to the activity creating the heat, the reality of the procedure is that a person can point a thermal imager at a home and determine what is going on inside the home at that exact moment. If such were not the case, then the device would be of little help to law enforcement agents, especially in regards to obtaining a search warrant based on information provided by a thermal imager. It is illogical and hypocritical to say that on the one hand a thermal imager is not intrusive and is incapable of revealing any intimate details, while on the other hand using the information obtained through a thermal imager to help procure a search warrant.

In addition, the Robinson court makes a second, and more critical, mistake in its analysis of Robinson’s subjective expectation of privacy. Not even taking into consideration what the emitted heat revealed, the court finds that “[w]hile Robinson attempted to conceal his marijuana growing operation by conducting it inside his home, the record does not indicate that he affirmatively took any action to prevent the resulting heat from being emitted into the atmosphere above his house.” Based on this information, the court holds that “Robinson’s inaction regarding the heat generated from his marijuana cultivation demonstrates his lack

77. See Ishmael, 48 F.3d at 852-53.
78. See United States v. Cusumano, 67 F.3d 1497, 1501 (10th Cir. 1995) (holding that the warrantless use of thermal imagery is unconstitutional).
79. Id. (citing Katz v. United States, 389 U.S. 347, 351-52 (1967)).
80. See Ishmael, 48 F.3d at 851.
81. Robinson, 62 F.3d at 1328-29.
of concern for it. Thus, we conclude that Robinson has not established a subjective expectation of privacy in this heat emitted from his home."

As the Robinson court points out, the burden of demonstrating a subjective and objective expectation of privacy is on the party alleging the unconstitutional search under the Fourth Amendment. Moreover, through its conclusion that a person must take affirmative steps in order to maintain his or her Fourth Amendment protection, the court also imposes the burden upon individuals of both keeping up with the latest technological advances to know how to counteract these new devices and actually attempting to do so. According to the court’s rationale, if Superman was employed by the police, an individual would have to line his or her home with lead walls in order to successfully demonstrate a subjective expectation of privacy.

"The record shows no consideration for the emitted heat whatsoever." This sentence from the Robinson decision would be comical if it were not terrifying. There is not a homeowner in this country who shows consideration, in terms of privacy, for the continuous heat their house emits. If deliberately venting heat was similar to a person shouting from an open window, the argument that a person who deliberately vents heat is ultimately forfeiting his or her expectation of privacy would be persuasive. However, in Robinson, the defendant did not intentionally vent the heat. Therefore, consistent with the shouting analogy, Mr. Robinson was found to have had no expectation of privacy in a conversation he had while in his house simply because he failed to insulate his abode with sound-proof walls.

More importantly, venting heat is not analogous to shouting out of a window because reading heat emissions requires advanced technologi-

82. Id. at 1329. However, Judge Edmondson does not necessarily agree with the rest of the court on this issue. In his concurrence, Edmondson writes that he “concur[s] in the result and in the opinion, except for the discussion . . . of whether Robinson had a subjective expectation of privacy in the heat generated by his indoor marijuana cultivation.” On that issue, Judge Edmondson admits to having “considerable doubt.” He does not suggest that the court is wrong in its analysis; however, he does submit that “the answer is less than clear to [him], considering especially that the court stresses the inaction of a homeowner as the decisive element.” Because the case could have been decided on the objective expectation of privacy issue alone, Edmondson “decline[s] to decide the unnecessary and, for [him], delicate question of subjective intent.” Id. at 1332 (Edmondson, J., concurring).

83. Robinson, 62 F.3d at 1328.

84. Moreover, the significance of this holding is not limited to thermal imagery cases, but to all cases concerning an individual’s right to privacy. Therefore, at least in the Eleventh Circuit, the Fourth Amendment is on its death bed and technology is waiting to pull the plug.

85. Id. at 1329.

86. Perhaps, with exception to Mr. Robinson, Mr. Ford, Mr. Myers, Mr. Pinson and the Ishmaels.

87. See Ford, 34 F.3d at 995.

88. Robinson, 62 F.3d at 1328.
cal equipment which individuals should not be expected to be cognizant of or be expected to evade. People cannot be forced to evade uncommon, highly sophisticated technological devices in order to preserve their expectation of privacy. Therefore, it should not be presumed that a person who vents heat, whether intentionally or not, is aware that the government might monitor that heat to determine activities occurring inside the person’s home.

In California v. Greenwood, where respondents put garbage bags out on the curb to be picked up by the garbage collector, the Court concluded that “[i]t may well be that respondents did not expect that the contents of their garbage bags would become known to the police or other members of the public.” Though the Court went on to hold that society is not prepared to recognize this expectation of privacy as reasonable, it did not hold that respondents did not have a subjective expectation of privacy in the trash. In light of this decision, it seems unfathomable that a court would find a person venting heat to have no subjective expectation of privacy.

In Robinson, where the defendant did not deliberately vent the heat, the court gives a final and fatal blow to the already weakened subjective expectation of privacy standard. The court concludes that inaction is as revealing as action in regards to an individual’s subjective expectation of privacy. Reasoning by analogy, the court not only suggests that a person who places their “garbage” outside has no subjective expectation of privacy, but, if technology allows, the person who leaves the garbage inside also has no subjective expectation of privacy in its contents.

Although the Robinson court squeezes yet another drop of acid on the Fourth Amendment through its conclusion that inaction is the same as action in regards to a person forfeiting his or her subjective expectation of privacy, this issue should not be dispositive in warrantless thermal imagery cases. If a person may reasonably expect his or her trash to not be inspected, although intentionally placed outside, a person cer-

89. See Dow Chemical Co. v. United States, 476 U.S. 227, 238 (1986) (“Surveillance of private property by using highly sophisticated surveillance equipment not generally available to the public . . . might be constitutionally proscribed absent a warrant.”). Furthermore, in Dow, at issue was the use of a camera, an item found in most American homes.
91. See id. at 39-40.
92. See, e.g., Ford, 34 F.3d at 995. Common sense dictates that a person placing garbage bags on the street generally will have a lesser expectation of privacy than the person who vents heat out into the atmosphere.
93. Robinson, 62 F.3d at 1328.
94. Id. at 1329.
tainly may reasonably expect his or her vented heat not to be examined by a thermal imager.

In its opinion, the Robinson court goes to great lengths to downplay the technological sophistication of a thermal imager. The court states that "[n]o revelation of intimate, even definitive, detail within the house was detectable" through the use of the thermal imager. However, the court fails to recognize that the level of technology used is inconsequential. The court concluded that Mr. Robinson had no subjective expectation of privacy in the emitted heat. Therefore, discussing the sophistication of the thermal imager is pointless.

As the court noted in the beginning of its opinion, a party alleging an unconstitutional search under the Fourth Amendment must prove both a subjective and an objective expectation of privacy. According to the court, because Robinson did not have a subjective expectation of privacy in the heat emitted from his home, he failed in his Fourth Amendment challenge. Additionally, the Eleventh Circuit found that the government may constitutionally ascertain whatever information possible from the heat emitted from his home. According to this rationale, if the thermal imager, or any other type of equipment, unquestionably depicted discrete, detailed images from within Mr. Robinson's home, the court would find that this was not a search because Mr. Robinson did not take affirmative measures to prevent the heat from escaping.

B. Objective Expectation of Privacy

After determining that Robinson did not have a subjective expectation of privacy, the court then proceeds to determine whether Robinson established the objective component of the Katz two-part test. The

96. Robinson, 62 F.3d at 1330.
97. Id.
98. See id. at 1328.
99. In Cusumano, the imager used was capable of resolving heat differentials greater than .5 degree Celsius. See United States v. Cusumano, 67 F.3d 1497, 1504 n.11 (10th Cir. 1995). As the court stated, "It would take no great wit to speculate as to the origin of two mild hot spots, commingled, in a bedroom at night." Id.; see also United States v. Field, 855 F. Supp. 1518, 1531 (W.D. Wis. 1994) (noting that thermal imagers can detect the tear ducts on a face); State v. Young, 867 P.2d 593, 595 (Wash. 1994) (noting that thermal imagers can detect a human form through an open, curtained window when the person is leaning against the curtain or when a person is leaning against a plywood door).
100. Robinson, 62 F.3d at 1328.
101. Id. at 1328-29.
102. And, as the laws of physics dictate, heat has a natural tendency to rise.
103. See Robinson, 62 F.3d at 1329. As previously noted, for Mr. Robinson's purposes, the court's analysis of his objective expectation of privacy is merely academic in light of his failure to prove his subjective expectation of privacy.
The court frames the issue as whether the "government's intrusion infringe[s] upon the personal and societal values protected by the Fourth Amendment." Therefore, the court notes that "Robinson would have to demonstrate that his privacy expectation in the heat rising from his house would be accepted by society as objectively reasonable."

The Robinson court begins its objective expectation of privacy analysis by citing Florida v. Riley. In Riley, the Court held that the use of a helicopter hovering at an elevation of 400 feet to inspect marijuana plants through the missing panels in a defendant's greenhouse did not constitute an unconstitutional search. The Court in Riley cited California v. Ciraolo as controlling. In Ciraolo, the police, acting on a tip, inspected the defendant's back-yard while flying in a fixed-winged aircraft at 1,000 feet. With the naked eye, the officers saw what they surmised to be marijuana growing in the yard. The Court held that the inspection was not a search subject to the Fourth Amendment because "[w]hat a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection." The Ciraolo Court went on to reason that "[i]n an age where private and commercial flight in the public airways is routine, it is unreasonable for respondent to expect that his marijuana plants were constitutionally protected from being observed with the naked eye from an altitude of 1,000 feet."

Both of these decisions were predicated on the fact that visual observation via a helicopter or airplane traveling in public airways is so routine that an individual does not have a reasonable expectation of privacy in something that is readily exposed to such observation. Therefore, in such cases, the critical elements are routine flights and visual observation via the naked eye by the officers. In fact, Justice O'Connor, who was the decisive fifth vote, stated in her Riley concurrence that the fact that the flight was legal was not dispositive. For Justice O'Connor the correct inquiry was "whether the helicopter was in the public airways at an altitude at which members of the public travel

104. Id. (citations omitted).
105. Robinson, 62 F.3d at 1329.
107. Id. at 451-52.
108. Id. at 449 (citing California v. Ciraolo, 476 U.S. 207 (1986)).
109. Id. (citing Ciraolo, 476 U.S. at 209).
110. Id. (citing Ciraolo, 476 U.S. at 209).
111. Id. (citing Ciraolo, 476 U.S. at 213).
112. Id. at 450 (quoting Ciraolo, 476 U.S. at 215).
113. See id. at 450; accord Ciraolo, 476 U.S. at 215.
with sufficient regularity that Riley's expectation of privacy from aerial observation was not 'one that society is prepared to recognize as reasonable.' Justice O'Conner reasoned that if such flights were not commonly made by members of the general public, then "Riley cannot be said to have 'knowingly expose[d] his greenhouse to public view.'" Furthermore, in a comment that is prophetic in light of the Robinson decision, Justice O'Conner argued that "[t]o require individuals to completely cover and enclose their curtilage is to demand more than the 'precautions customarily taken by those seeking privacy.'"

If the police officers in Riley were equipped with thermal imagers it is more than probable that the decision would have been different. First, it is certainly not routine for members of the general public to fly over homes carrying thermal imagers. Second, only five justices were able to come to the highly guarded and limited holding that exposing one's property to naked eye aerial visual observation from airplanes and helicopters in areas where commercial flights are common constitutes "knowing" exposure. There is a vast and obvious difference between the reasonable expectations of privacy attached to the natural exposure of heat emissions to a thermal imager and the expectations attached to leaving property exposed to the naked eye.

The Robinson court, quoting Riley, states that "'no intimate details connected with the use of the home or curtilage were observed.'" However, this statement is true in Riley only because everything observed was exposed outside, to the naked eye. On the contrary, in Robinson, the officers obtained information about intimate activities transpiring inside Robinson's home that were only detectable and discernible through the use of a highly technical device.

116. Id. (citation omitted).
117. Id. at 455 (O'Conner, J., concurring).
118. Riley, 488 U.S. at 454 (O'Conner, J., concurring) (quoting Rakas v. Illinois, 439 U.S. 128, 152 (1978) (Powell, J., concurring)). This language is also in direct conflict with the Robinson court's subjective expectation analysis which requires an individual to take affirmative measures to conceal heat emissions in order to demonstrate a subjective expectation of privacy. Moreover, it would be contrary to the laws of physics to completely prevent heat emissions from escaping from one's home. And, if this feat were attempted by an individual who wanted to keep his or her heat emissions private, the continuous use of a space-suit would most likely be sufficient only to prolong that individual's painful and unnatural death.
119. See Riley, 488 U.S. at 449-50. This is especially true in light of Justice O'Conner's decisive concurrence. See id. at 452-55 (O'Conner, J., concurring).
120. Id. at 450.
122. Riley, 488 U.S. at 448.
123. Robinson, 62 F.3d at 1327. Moreover, although the activity in this case happened to be the cultivation of marijuana, countless innocent activities also produce specific heat signatures.
The Robinson court continues its analysis by referring to Dow Chemical Co. v. United States, a second aerial surveillance case decided by the Supreme Court. Citing Dow, the Robinson court frames the issue as "whether the technology reveals 'intimate details.'" In Dow, the Environmental Protection Agency ("EPA") hired a private firm to take aerial photographs of the company's 2,000-acre chemical manufacturing facility. The photographer used cameras that were sophisticated, yet commercial, and were commonly used in map-making. The Court held that the photographs were "not so revealing of intimate details as to raise constitutional concerns." This conclusion was based on the fact that "although [the photographs] undoubtedly give EPA more detailed information than naked-eye views, they remain limited to an outline of the facility's buildings and equipment."

The key factors in Dow were that the photographs only revealed what was exposed to visual observation and what could have been viewed legally without the use of any equipment. The EPA did not employ techniques to ascertain any information about activities occurring within the buildings.

In Robinson, however, the purpose of the FLIR was to obtain information concerning Robinson's activities inside his home. Moreover, the information ascertained via the thermal imager in Robinson presumably could not have been obtained through natural senses, despite the officer's proximity to Mr. Robinson's house.

The Robinson court contends that the FLIR surveillance was harmless in that it merely projected a "gross, nondiscrete bright image indicating the heat emitted from the residence." However, the Robinson court fails to recognize that trained thermographers are able to attach certain activities to these heat signatures. As the Court in Dow forewarned, "[i]t may well be, as the Government concedes, that surveill-
lance of private property by using highly sophisticated surveillance equipment not generally available to the public. . . . might be constitutionally proscribed absent a warrant."135 At least in the Eleventh Circuit, this warning has fallen upon deaf ears.

The Robinson court then suggests that no Fourth Amendment violation occurred as "there was no intrusion whatsoever into Robinson's home because the emitted heat rose from his house and then was measured by the FLIR surveillance."136 The Supreme Court has previously used this exact rationale when it argued that no Fourth Amendment violation occurs through the use of microphones137 or wiretaps so long as "[i]here [is] no entry of the houses or offices of the defendants."138 Therefore, just as sound vibrations travel into the atmosphere, so do heat emissions. Reliance on this rationale by the Robinson court is misplaced since the Supreme Court explicitly overruled this line of reasoning nearly thirty years ago.139 In Katz, the Court held that "it [has] become[ ] clear that the reach of [the Fourth] Amendment cannot turn upon the presence or absence of a physical intrusion into any given enclosure."140

Fourth Amendment analysis has come full-circle, back to 1928 when Olmstead was decided.141 The rationale used in Katz is no longer controlling in the Eleventh Circuit.142 The Robinson court, as did the Olmstead143 and Goldman144 Courts, focuses on whether a physical trespass occurred.145 The Robinson court argues that infrared surveillance does not violate the Fourth Amendment because a thermal imager "'does not send any beams or rays into the area on which it is fixed or in any way penetrate[s] structures within that area.'"146 The correct issue, however, as set forth in Katz, is not whether physical penetration occurred but whether the surveillance "violate[s] the privacy upon which [the

135. Dow Chemical Co., 476 U.S. at 238. While most people own cameras, some even highly sophisticated, the Robinson court would be hard pressed to walk into people's homes and find a thermal imager lying next to the power drill or weed-wacker. Moreover, while it can be argued that a thermal imager simply enhances an individual's natural sense of touch, a person cannot measure heat signatures. This is quite different than a camera which only enhances and magnifies what otherwise might be seen by the natural eye.
136. Robinson, 62 F.3d at 1330.
140. Id.
141. Olmstead, 277 U.S. at 438.
142. Unfortunately, Supreme Court decisions do not have the luxury of nine lives.
143. Olmstead, 277 U.S. at 466.
144. Goldman, 316 U.S. at 134-35.
145. Robinson, F.3d at 1330.
146. Id. at 1330 n.7 (quoting United States v. Ishmael, 48 F.3d 850, 856 (5th Cir. 1995) (quoting United States v. Penny-Feeney, 773 F. Supp. 220, 223 (D. Haw. 1991))).
defendant] justifiably relie[s] . . . and [t]he fact that the electronic device employed . . . did not happen to penetrate the wall of the booth can have no constitutional significance."147 The Katz Court held that the petitioner was justified in relying on Fourth Amendment protection from the "uninvited ear" while inside a public telephone booth.148 Certainly, a person is justified to rely on Fourth Amendment protection from the uninvited thermal imager while inside his or her home.149

At this point of the court’s objective expectation of privacy analysis, the Greenwood case is significant in its absence.150 Most courts which have found that the use of thermal imagery does not constitute a search have cited Greenwood for support. In those cases, the courts have suggested that putting one’s garbage on the curb is the same as deliberately venting heat.151 This analysis is unsound however because the use of a thermal imager is vastly less common than the rummaging through garbage by "animals, children, scavengers, snoops, and other members of the public,"152 and it was the commonality of these occurrences which the Court used as a basis for denying the existence of a reasonable expectation of privacy in one’s garbage.153

Moreover, while the garbage-heat analogy is a tenuous argument at best, it is one that the Robinson court cannot make. In Greenwood, the Court reasoned that there is no objectively reasonable expectation of privacy because people deliberately relinquish their garbage to third persons, garbage collectors.154 However, in Robinson, the defendant did not deliberately vent the heat.155 Therefore, although the Robinson court correctly omitted Greenwood from its opinion, it should also have omitted cases which relied on Greenwood.156

The Robinson court then suggests that use of "infrared surveillance to ascertain heat intensity is analogous to the warrantless use of drug-

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148. Id. at 352.
149. The heightened expectation of privacy afforded to the home is discussed infra.
151. United States v. Myers, 46 F.3d 668, 670 (7th Cir. 1995); United States v. Ford, 34 F.3d 992, 997 (11th Cir. 1994); United States v. Pinson, 24 F.3d 1056, 1058 (8th Cir. 1994).
152. Greenwood, 486 U.S. at 40 (footnotes omitted).
153. Id. at 40-41.
154. Id. at 41.
156. See, Myers, 46 F.3d at 670; Ford, 34 F.3d at 997; Pinson, 24 F.3d at 1058. These courts have misapplied Greenwood to cases involving intentional venting of heat by wrongly analogizing garbage on the street to heat emissions in the atmosphere. Moreover, the Robinson court has compounded the significance of these misapplications by expanding these holdings and applying them to all thermal imagery cases, thereby ignoring the Supreme Court’s decision in Greenwood which hinged on the defendant’s deliberate relinquishment of his “garbage.”
detecting dogs to locate contraband."\(^{157}\) In *United States v. Place*, the Supreme Court explained that a canine sniff "discloses only the presence or absence of narcotics, a contraband item."\(^{158}\) Indeed, it is perfectly legal to emit heat. Unlike a canine sniff, a thermal imager detects heat emissions from everything: people, lamps, stoves, etc.\(^{159}\) The Supreme Court admitted that it was "aware of no other investigative procedure that is so limited . . . in the content of the information revealed by the procedure."\(^{160}\) Because a thermal imager is incapable of limiting its detection to illegal activities, the canine sniff analogy has no bite.

In its misuse of *Place*, the *Robinson* court also fails to recognize an essential concept in Fourth Amendment analysis: "sanctity of the home."\(^{161}\) The *Robinson* court contends that "'[j]ust as odor escapes a compartment or building and is detected by the sense-enhancing instrument of a canine sniff, so also does heat escape a home and is detected by the sense-enhancing infrared camera.'"\(^{162}\) Through this analysis, the *Robinson* court has given people's homes the same constitutional protections as carry-on bags.

In fact, throughout the entire majority opinion, the *Robinson* court fails to recognize the significance of the sanctity of one's home.\(^{163}\) Moreover, by comparing Robinson's home with the luggage in *Place*,\(^{164}\) the *Robinson* court reveals its lack of recognition for the sanctity of the home.\(^{165}\) In *Dow Chemical Co.*, the Court noted "that the Government has 'greater latitude to conduct warrantless inspections of commercial property' because 'the expectation of privacy that the owner of commercial property enjoys in such property differs significantly from the sanc-

\(^{157}\) *Robinson*, 62 F.3d at 1330 (citing *United States v. Place*, 462 U.S. 696, 707 (1983)).


\(^{159}\) In *United States v. Field*, the court noted that the thermal imager had detected heat emitted from a dehumidifier in a closet. 855 F. Supp. 1518, 1519 (W.D. Wis. 1994).

\(^{160}\) *Place*, 462 U.S. at 707.


\(^{162}\) *Robinson*, 62 F.3d at 1330 (quoting *United States v. Pinson*, 24 F.3d 1056, 1058 (8th Cir. 1994)).

\(^{163}\) *Id.* at 1328-30. This is true in both the subjective and objective expectation of privacy analyses.

\(^{164}\) *Id.* at 1330.

\(^{165}\) In fact, the Second Circuit has held that a canine sniff used outside the defendant's apartment constituted a search prohibited under the Fourth Amendment. *See United States v. Thomas*, 757 F.2d 1359, 1366-67 (2d Cir. 1985). The court stated that "a practice that is not intrusive in a public airport may be intrusive when employed at a person's home." *Id.* at 1366. Therefore, "'[b]ecause of the [defendant's] heightened expectation of privacy inside his dwelling, the canine sniff at his door constituted a search." *Id.* at 1367.
tity accorded an individual's home." This distinction between home and commercial property was a critical factor in the Court's decision that the aerial surveillance of commercial buildings did not constitute a search under the Fourth Amendment.

The Supreme Court, through its analysis of the Fourth Amendment, has endorsed a heightened expectation of privacy in the sanctity of one's home. This concept is illustrated through a comparison of two Supreme Court decisions: United States v. Knotts and United States v. Karo. Both of these cases involved the warrantless use of electronic tracking devices. In both cases, "beepers" were placed inside containers of chemicals that the defendants bought presumably to aid in the manufacturing of drugs.

In Knotts, the police followed the defendant's car with help from the beeper. At some point, the police lost all contact with the car. However, later the police were able to pick up the signal from the beeper which was determined to be inside a cabin. Once the location of the beeper was ascertained, the monitoring ended. The Court held that use of the beeper did not constitute a search because it did not reveal any information about activities within the cabin, and any information provided by the beeper was ascertainable through constant visual surveillance.

On the other hand, in Karo, the tracking continued for several months. First, the defendant transported the marked container through public roads to his house. Then the defendant took the container to another defendant's home. Next, the defendant transported the container to a commercial storage facility, then to a third defendant's home, and finally to a house rented by all three defend-

167. See id.
170. See Karo, 468 U.S. at 707; Knotts, 460 U.S. at 278.
171. See id.
172. See id. at 278.
173. See id. at 282.
174. See id. at 707; Knotts, 460 U.S. at 278.
175. See id.
176. See id. at 278.
178. See id.
179. See id.
The Court held, as in Knotts, that while traveling on public roads or while in the storage facility, the monitoring of the beeper did not constitute a search because the defendants had no protected rights of privacy in activities occurring in public places. However, each time the container entered a home, the continued monitoring of the beeper was deemed a search because it “reveal[ed] a critical fact about the interior of the premises that the Government . . . could not have otherwise obtained without a warrant.”

Unlike the Eleventh Circuit in Robinson, the Supreme Court in Karo was not concerned with whether the beeper revealed intimate, definitive or detailed information from within the house. On the contrary, the only information revealed to the officers in Karo was that the beeper was inside of the defendant’s house. However, the Supreme Court found this revelation sufficient to constitute an unlawful search under the Fourth Amendment.

The Robinson court argues that a thermal imager is not as evasive as an X-ray machine and therefore not sufficient to trigger Fourth Amendment protections. In essence, the Robinson court sets the limit for warrantless governmental intrusion at the use of an X-ray machine. However, while a thermal imager may not be the functional equivalent of an X-ray machine, a thermal imager certainly reveals more information about activities transpiring within a home than does a beeper. Nevertheless, in a day and age where advancing technology continuously strengthens the threat of governmental intrusion, instead of resuscitating an already weakened Fourth Amendment and reaffirming the sanctity of one’s home, the Robinson court has left the front door wide open.

The Supreme Court in Karo stated that “[a]t the risk of belaboring the obvious, private residences are places in which the individual normally expects privacy free of governmental intrusion not authorized by a warrant, and that expectation is plainly one that society is prepared to recognize as justifiable.” What was obvious to the Supreme Court however, has been forgotten in the Eleventh Circuit. In both Robinson and Karo, surveillance equipment was used to reveal information about activities occurring inside of a house that otherwise could not have been

180. Id. at 709-10.
181. See id. at 720-21.
182. Id. at 715.
183. See id.
184. Id. at 715.
185. See id. at 716.
186. United States v. Robinson, 62 F.3d 1325, 1330 (11th Cir. 1995) (citing United States v. Ishmael, 48 F.3d 850, 856 (5th Cir. 1995)).
187. Karo, 468 U.S. at 714. In light of today’s state of the law in the Eleventh Circuit, it seems only fitting that the Supreme Court voiced this comment in 1984.
obtained.\textsuperscript{188} Furthermore, unlike the information obtainable by a thermal imager, almost all information revealed via a beeper could be ascertained simply by monitoring a person's home from outside.

This Casenote does not contend that the \textit{Robinson} decision will lead to the demise of an individual's Fourth Amendment right to privacy in the Eleventh Circuit. Instead, this Casenote suggests that this time has already come. The \textit{Robinson} court mandates that a person take evasive actions to conceal heat emissions in order to maintain a subjective expectation of privacy and satisfy the first prong of the \textit{Katz} two-prong test.\textsuperscript{189} Next, in its analysis of Mr. Robinson's objective expectation of privacy, the court takes a "sanctity of the heat" approach and ignores the sanctity of the home. The court suggests that it is unreasonable for society to recognize an expectation of privacy in one's heat.\textsuperscript{190} However, the court fails to acknowledge that these heat signatures reveal information about activities transpiring from within a home. Instead, the court is solely concerned with whether a physical penetration into the home actually occurred.\textsuperscript{191}

Finally, the \textit{Robinson} court argues that a thermal imager is not as evasive as an X-ray machine and cannot reveal intimate information.\textsuperscript{192} The court states that "we are unconvinced that society ever would accept use of the Fourth Amendment to shield unlawful activity within one's home when there are noninvasive methods of detecting such criminal activity . . . ."\textsuperscript{193} However, a thermal imager detects heat emissions from all activities, not just illegal ones. Thus, the court is implying that the use of a thermal imager on Mr. Robinson's home was justified by the fact that he was indeed cultivating marijuana instead of cultivating flowers or consummating a relationship.\textsuperscript{194} The court assumes that individuals are prepared to have every household monitored in order to detect illegal activities. However, this contradicts what Justice Brandeis proclaimed, that "the right to be let alone" is "the most comprehensive of rights and the right most valued by civilized men."\textsuperscript{195}

It would seem fitting at this point to list a parade of technical horrors associated with the futuristic development of thermal imagery.

\textsuperscript{188} See Karo, 468 U.S. at 715; Robinson, 62 F.3d at 1327.
\textsuperscript{189} Robinson, 62 F.3d at 1328. Moreover, this case focused on heat emissions however the same rationale is applicable to sound, smell, sight etc., and, according to the \textit{Robinson} court, a person must take steps to avoid detection from any form of technological surveillance equipment. Id.
\textsuperscript{190} See id. at 1329-30.
\textsuperscript{191} See id. at 1330 n.7.
\textsuperscript{192} Id. at 1329-30.
\textsuperscript{193} Id. at 1330.
\textsuperscript{194} See supra note 101 and accompanying text.
\textsuperscript{195} Olmstead v. United States, 277 U.S. 438, 478 (1928) (Brandeis, J., dissenting).
However, such an exercise would only detract from the relevance of the *Robinson* decision and would only create a false sense of security by implying that the effects of this decision will not be felt until some time in the future. However, the future is here. Modern technology has battled the protections afforded by the Fourth Amendment, and in *United States v. Robinson*, the Eleventh Circuit has awarded thermal imagery a technical knockout.

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