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Constitutional Law: Fourth Amendment Search and Seizures and Thermal Imaging

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CASE COMMENTS

CONSTITUTIONAL LAW: FOURTH AMENDMENT SEARCH AND SEIZURES AND THERMAL IMAGING*

United States v. Kyllo, 140 F.3d 1249 (9th Cir. 1998)

*Mark D. Kiser***

Appellant was arrested and charged with manufacturing marijuana after federal law enforcement officers searched Appellant's house and found an indoor marijuana growing operation.[1] Before obtaining a search warrant, a National Guardsman used a thermal imager[2] to measure the heat emitted from Appellant's home.[3] Based on the thermal imager readings,[4] a federal officer obtained a warrant to search Appellant's home and discovered the illegal marijuana operation.[5]

Appellant moved to suppress the evidence on the ground that it was obtained as part of an unreasonable search.[6] The trial court denied the motion and found that the government's use of the thermal imager was not an unreasonable search under the Fourth Amendment.[7] The United States Court of Appeal for the Ninth Circuit remanded the case back to the trial court for a determination of the thermal imager's technical capacities.[8] On remand, the trial court found that the thermal imager did not reveal intimate details of Appellant's home. The court, therefore, found that the thermal scan did not qualify as a search under the Fourth Amendment.[9]

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** This Case Comment is dedicated to my parents. I cannot adequately thank them for their support and instruction throughout the years. I would also like to thank Professor Teresa Rambo, who gave me the idea for this topic.

1. *See* United States v. Kyllo, 140 F.3d 1249, 1250-51 (9th Cir. 1998).
2. *See id.* A thermal imager observes and records the heat patterns emanating from objects within its view. *See id.* at 1251. The heat differentials are displayed on a viewfinder with an object's heat emissions represented by a lighter or darker color. *See id.*
3. *See id.*
4. The thermal readings in this case detected the heat emitted by the high intensity grow lamps used in Appellant's indoor cultivation of marijuana. *See id.*
5. *See id.* The thermal imager data was one of several pieces of information on which a search warrant was granted by a federal magistrate judge. Among the other information was the observation of unusually high power usage at Appellant's house, information provided by an informant and other circumstantial evidence. *See id.* at 1250.
6. *See* United States v. Kyllo, 809 F. Supp. 787, 789 (D. Or. 1992).
7. *See id.* at 792.
8. *See* United States v. Kyllo, 37 F.3d 526, 531 (9th Cir. 1994).
9. *See* United States v. Kyllo, No. CR. 92-51-FR, 1996 WL 125594, at *2 (D. Or. Mar. 15,

The Ninth Circuit reversed and HELD, that the law enforcement officers' use of a thermal imager to detect heat emitted from Appellant's home revealed intimate details of Appellant's home and, therefore, constituted a search for which a warrant was required.[10]

The Fourth Amendment to the United States Constitution provides the right of the "people to be secure in their persons, houses, papers and effects, against unreasonable searches and seizures."[11] Early Supreme Court decisions limited Fourth Amendment protection to people and places.[12] However, the Supreme Court altered its view of Fourth Amendment protection in its landmark decision, *Katz v. United States*,[13] by finding that the Fourth Amendment protects "people, not places."[14]

In *Katz*, the Court addressed the issue of whether the government can electronically eavesdrop on a telephone conversation that takes place inside a public phone booth.[15] To obtain evidence of Petitioner's transmission of wagering information across telephone lines, FBI agents used an electronic listening and recording device to eavesdrop on Petitioner's conversations in a public telephone booth.[16] Based on this evidence, the petitioner was subsequently convicted.[17]

In reversing the petitioner's conviction, the Court focused on the petitioner's expectations and not the fact that the telephone booth was a public place.[18] Accordingly, the Court determined that once the petitioner entered the phone booth and shut the door behind him, he could "assume that the words he utter[ed] into the mouthpiece [would] . . . not be

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1996). A separate opinion involves the use of firearms found in Kyllo's home to enhance the sentencing. *See* United States v. Kyllo, CR No. 92-51-FR, 1996 WL 571832, at *1 (D. Or. Oct 3, 1996). The court found this to be improper because the guns should not have been found to be connected with the marijuana growing. *See id.* at *3. The court did not comment on the thermal imager's intrusiveness and the Fourth Amendment. *See id.*

10. *See Kyllo*, 140 F.3d at 1254-55. Because the thermal scan constituted an unreasonable search of Appellant's home, the court found that it should not have been considered by the magistrate in determining whether to grant a search warrant. *See id.* at 1255. However, the court did not decide whether the evidence, other than the thermal scan, was sufficient to support a search warrant. *See id.* Therefore, the court remanded the issue back to the district court to decide whether the other evidence provided to the magistrate judge, excluding the thermal readings, was sufficient to sustain a search warrant. *See id.*

11. U.S. CONST. amend. IV.

12. *See generally* Olmstead v. United States, 277 U.S. 438, 464 (1928) (finding that wiretapping did not violate the Fourth Amendment because that amendment was meant to protect "material" things, such as places or areas, whereas wiretapping involves hearing, a non-material thing).

13. 389 U.S. 347 (1967).

14. *Id.* at 351.

15. *See id.* at 348.

16. *See id.*

17. *See id.*

18. *See id.* at 353.

broadcast to the world."[19] By focusing on Petitioner's expectations, the Court also established that the presence or absence of a physical intrusion into the booth was constitutionally insignificant.[20]

Justice Harlan's concurrence in *Katz* provided a two-part test which has become the modern framework in which courts analyze Fourth Amendment search and seizure issues.[21] The first question is whether a person exhibited an actual (subjective) expectation of privacy[22] in the object of the challenged search. The second question is whether that privacy expectation is one that society would recognize as reasonable (objective).[23] In agreeing with the majority, Justice Harlan found that the phone booth was a temporarily private place, making the petitioner's momentary expectation of privacy reasonable.[24]

The second prong of the *Katz* test has been criticized for its inability to uphold Fourth Amendment protections in the face of new technologies.[25] As surveillance technologies become more sophisticated and widespread, individuals will necessarily enjoy lesser expectations of privacy.[26] Thus, as thermal imagers become more common, it is increasingly unreasonable for individuals to expect that their activities will not be monitored by such devices.[27] Despite its shortcomings, the *Katz* test remains the criteria courts use to determine whether the Fourth Amendment applies to a specific situation.[28]

The Eighth Circuit, in *United States v. Pinson*,[29] was the first circuit to use the *Katz* test in a case involving a thermal imager scan.[30] In *Pinson*,

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19. *Id.* at 352.

20. *See id.* at 353.

21. *See id.* at 361 (Harlan, J., concurring).

22. *See id.* Justice Harlan provided examples of when an individual might manifest a subjective expectation of privacy. *See id.* He stated that a person's home is a place where a person would have an expectation of privacy which extends to the objects or activities within the home. *See id.* However, "objects, activities, or statements that . . . [an individual] exposes to the 'plain view' of outsiders are not 'protected' because no intention to keep them to himself has been exhibited." *Id.*

23. *See id.*

24. *See id.*

25. *See generally* Lewis R. Katz, *In Search of a Fourth Amendment for the Twenty-first Century*, 65 IND. L.J. 549, 564-65 (1990) (noting that as the *Katz* test evolved, it has "strip[ped] the individual of a great measure of [F]ourth [A]mendment protection . . . as a result of living in a high-tech society"); Wayne R. LaFave, *The Forgotten Motto of Obsta Principiis in Fourth Amendment Jurisprudence*, 28 ARIZ. L. REV. 291, 309-10 (1986) (cautioning that under the *Katz* test, individuals cannot protect their privacy in the face of advancing technology).

26. *See* Katz, *supra* note 25, at 564-65.

27. *See id.*

28. *See* Douglas A. Kash, *Prewarrant Thermal Imaging as a Fourth Amendment Violation: A Supreme Court Question in the Making*, 60 ALB. L. REV. 1295, 1301 (1997).

29. 24 F.3d 1056 (8th Cir. 1994).

30. Indeed, many courts have been reluctant to address the issue of thermal imaging, and have

Drug Enforcement Agency agents performed an aerial surveillance[31] of Appellant's home, using a thermal imager to detect heat emissions.[32] Based on these thermal readings, the agents obtained a search warrant and discovered a marijuana growing operation inside Appellant's home.[33]

In applying the first prong of the *Katz* test, the court found that Appellant did not manifest a subjective expectation of privacy.[34] The court reasoned that the heat given off by the grow lamps was simply "heat waste"[35] which Appellant could not expect to remain private.[36] Furthermore, the court found that even if Appellant could satisfy the first prong of *Katz*, his privacy expectation would not be one that society would recognize as objectively reasonable.[37] Again, the court relied on the waste heat approach, and analogized the abandoned heat to garbage left at the curb[38] and odors emanating from luggage.[39] Like bagged garbage and these odors, the waste heat was voluntarily vented[40] outside Appellant's home

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instead held that evidence other than thermal readings was sufficient to support a search warrant. *See, e.g.*, United States v. Cusumano, 83 F.3d 1247, 1251 (10th Cir. 1996) (stating that it was "neither necessary nor wise" to decide whether the use of a thermal imager to scan a residence constitutes a search under the Fourth Amendment); United States v. Deaner, 1 F.3d 192, 202 (3d Cir. 1993) (holding that marijuana leaves and stems in Appellant's garbage established probable cause, thus obviating the need to decide the constitutionality of a thermal scan); United States v. Casanova, 835 F. Supp. 702, 708 (N.D.N.Y. 1993) (holding that an informant's tips established probable cause, thus foreclosing an inquiry into whether a thermal scan constituted a search under the Fourth Amendment).

31. *See Pinson*, 24 F.3d at 1057. Although the agents scanned the residence from a helicopter, the court limited its analysis of Fourth Amendment protection to the use of the thermal imager and did not consider the constitutionality of the low helicopter flight. *See id.* at 1057-58.

32. *See id.* at 1057.

33. *See id.*

34. *See id.* at 1058.

35. *Id.* The court relied on *United States v. Penny-Feeney*, 773 F. Supp. 220 (D. Haw. 1991), *aff'd on other grounds sub nom, United States v. Feeney*, 984 F.2d 1053 (9th Cir. 1993), for the "heat waste" framework. The *Penny* court found that a thermal imager only measured abandoned heat leaking from a building for which the property owner could not manifest a subjective expectation of privacy. *See Penney-Feeney*, 773 F. Supp. at 226-28.

36. *See Pinson*, 24 F.3d at 1058.

37. *See id.* at 1059.

38. *See id.* at 1058-59. The Supreme Court, in *California v. Greenwood*, 486 U.S. 35 (1988), held that a property owner did not have an expectation of privacy for bagged garbage left outside his residence. *See id.* at 39-41. Therefore, the police's warrantless search and seizure of the garbage did not violate the Fourth Amendment. *See id.*

39. *See Pinson*, 24 F.3d at 1058-59. The Supreme Court, in *United States v. Place*, 462 U.S. 696 (1983), held that the use of nonintrusive equipment, such as a police trained dog to sniff luggage for the presence of narcotics, did not constitute a search under the Fourth Amendment. *See Place*, 462 U.S. at 707.

40. *See Pinson*, 24 F.3d at 1058. The court did not discuss any specific measures Appellant took to actively expel the heat, yet still found that it was "voluntarily vented" outside, through a skylight and the roof. *Id.* at 1057-58.

and therefore he did not have a reasonable expectation of privacy for that heat.[41]

The court also focused on the technical capacity of the thermal imager, and concluded that it did not reveal any intimate details of the home.[42] Indeed, the court found that "[n]one of the interests which form the basis for the need for protection of a residence, namely the intimacy, personal autonomy and privacy associated with a home, are threatened by thermal imagery."[43]

The first circuit court case[44] to hold that a thermal imager scan was a search under the Fourth Amendment was *United States v. Cusumano*.[45] In *Cusumano*, once again, criminal investigation agents scanned Appellant's home with a thermal imager, which led to a search warrant and Appellant's subsequent arrest for marijuana cultivation.[46] In applying the *Katz* test, the *Cusumano* court rejected the waste heat approach adopted by other circuits up to that point.[47]

In applying the first prong of the *Katz* test, the *Cusumano* court reasoned that the other circuits had misframed the relevant Fourth Amendment inquiry.[48] Instead of asking whether Appellant had an expectation of privacy in the heat emitted, the court looked at the link

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41. *See id.* at 1058.

42. *See id.* at 1059. The intimate details language comes from the United States Supreme Court case *Dow Chem. Co. v. United States*, 476 U.S. 227, 238 (1986). In *Dow*, the Court analyzed the constitutionality of the government's use of a "precision aerial mapping camera" to view a private corporation's industrial complex. *Id.* at 229. The Court found that the camera was not "so revealing of intimate details as to raise constitutional concerns." *Id.* at 238. Although the camera enhanced human vision it still only provided an outline of the buildings and equipment on the complex. *See id.* The Court contrasted this mere enhancement of human vision with an electronic device which could penetrate walls or windows so as to hear or record confidential discussions. *See id.* at 238-39.

43. *Pinson*, 24 F.3d at 1059.

44. Indeed, after *Pinson*, other circuits had found that a thermal imaging scan of a home does not implicate the Fourth Amendment. *See, e.g.*, United States v. Myers, 46 F.3d 668, 670 (7th Cir. 1995) (discussing thermal surveillance of a house); United States v. Ford, 34 F.3d 992, 993 (11th Cir. 1994) (discussing thermal surveillance of a mobile home); *see also* United States v. Ishmael, 48 F.3d 850, 853 (5th Cir. 1995) (holding that a thermal imager scan of an open field did not constitute a search under the Fourth Amendment).

45. 67 F.3d 1497 (10th Cir. 1995), *vacated on other grounds*, 83 F.3d 1247 (10th Cir. 1996). Although the first *Cusumano* case was subsequently vacated, the vacating court specifically stated that "we do not decide whether the use of a thermal imager to detect heat emissions from a personal residence constitutes a search under the Fourth Amendment." *Cusumano*, 83 F.3d at 1248. The vacating court found that even without the thermal imager evidence, there was enough evidence to support the issuance of a search warrant, and so the court specifically did not decide the constitutionality of a thermal scan. *See id.* at 1248-49.

46. *See Cusumano*, 67 F.3d at 1499.

47. *See id.* at 1501.

48. *See id.* at 1500.

between the heat and activities inside the home.[49] The court reasoned that the true value of the imager was what it revealed about the inside of Appellant's home.[50] Therefore, the court determined that the object of the scan was the activity inside the house, and not the heat emitted.[51] The court concluded that by concealing the grow operation inside his house, the defendant manifested an expectation of privacy for the heat signatures of domestic activities.[52]

In regard to the second prong of the *Katz* test, the government argued that a thermal imager did not intrude on a societally reasonable privacy expectation because the imager did not reveal any intimate details of the residence.[53] The court dismissed this argument by reasoning that the device intruded upon the privacy of the home, "not because it records white spots on a dark background but rather because the interpretation of that data allows the government to monitor those domestic activities that generate a significant amount of heat."[54] The court reasoned that although the imager did not reveal such intimate activities as occur in the bedroom, it still stripped the home of the most important dimension of its security: "the 'right to be let alone' from the arbitrary and discretionary monitoring of our actions by government officials."[55]

Finding the instant case factually similar to *Cusumano*, the instant court followed the reasoning of *Cusumano*[56] and focused on the link between

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49. *See id.* at 1501. Specifically the court framed the issue for the first prong of *Katz*, as whether the "link between the 'waste heat' observed by the imager and the activities that gave rise to that heat [is] so attenuated as to restrict the 'expectation of privacy' analysis to the heat alone[.]" *Id.* In response, the court answered, "We think not." *Id.*

50. *See id.*

51. *See id.*

52. *See id.* at 1502. The court concluded that Appellant manifested an expectation of privacy because he located his activities within the sanctity of his home. *See id.* The interior of a home is a location traditionally accorded the highest Fourth Amendment protection. *See, e.g.*, Florida v. Riley, 488 U.S. 445, 452-55 (1989) (O'Connor, J., concurring) (upholding Fourth Amendment's requirement of a warrant); United States v. Karo, 468 U.S. 705, 714 (1984); Payton v. New York, 445 U.S. 573, 590 (1980); Silverman v. United States, 365 U.S. 505, 511 (1961).

53. *See Cusumano*, 67 F.3d at 1503.

54. *Id.* at 1504.

55. *Id.* The court also recognized that technology was not static and the technical capacities of thermal imagers would undoubtedly improve in the future. *See id.* By limiting the use of thermal imagers before they are able to reveal more intimate details, the court did not allow the reasonableness of a privacy expectation to "hinge upon the outcome of a technological race of measure/counter-measure between the average citizen and the government[,]" a race the court expected the people would lose. *Id.*

56. The dissent in the instant case obviously departed from the *Cusumano* line of reasoning. *See Kyllo*, 140 F.3d at 1255 (Hawkins, J., dissenting). Writing for himself, Judge Hawkins reasoned that a search involves an "invasion of protected space." *Id.* Judge Hawkins did not find the thermal imager revealed any indoor details or activities but only, "measured the heat emanating from and on the outside of a house." *Id.* Judge Hawkins suggested the Ninth Circuit follow its sister circuits

heat emissions and their corresponding indoor activities.[57] Because the purpose of a thermal imager is to reveal the heat signatures of indoor activities, the instant court analyzed Appellant's privacy expectation for those indoor activities, not the heat emissions themselves.[58] Relying on *Cusumano*, the instant court concluded that Appellant manifested a subjective expectation of privacy in the heat signatures of his domestic activities.[59]

Regarding the second prong of the *Katz* test, the instant court relied on the long recognized principle that the expectation in the privacy of a residence is presumptively reasonable.[60] The court also dismissed the government's argument that the imager did not reveal enough intimate details to raise constitutional concerns.[61] The court reasoned that even the most routine and trivial activities within a home are sufficiently intimate as to give rise to Fourth Amendment protection from warrantless observations by law enforcement officers.[62] The instant court also took into account the rapid pace of technology and decided to curb the warrantless use of thermal imagers before they became capable of detecting even greater intimacies.[63]

By rejecting the waste heat approach followed in *Pinson*, the instant court more appropriately followed the Fourth Amendment analysis set forth in *Katz*. In *Katz*, the Supreme Court could have asked whether Appellant had an expectation of privacy in the "waste" vibrational sound energy emitted from the phone booth.[64] However, the Supreme Court did not focus on the privacy expectation of this vibrational energy and instead focused on the expectation of privacy in the target of the eavesdropping—Katz's conversation.[65]

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and adopt this waste heat approach and find that a thermal scan does not constitute a search under the Fourth Amendment. *See id.*

57. *See id.* at 1253.

58. *See id.*

59. *See id.* The court also reached this conclusion by relying on the United States Supreme Court case of *California v. Ciraolo*, 476 U.S. 207 (1986). *See Kyllo*, 140 F.3d at 1252-53. The *Ciraolo* Court found that a defendant manifested a subjective expectation of privacy for his outdoor marijuana garden by erecting two fences which blocked all ground level views of his garden. *Ciraolo*, 476 U.S. at 211. The Court maintained that this subjective privacy expectation was sufficient, even though the government observation in the case was from the air. *See id.* Accordingly, the instant court reasoned that an individual, such as Appellant, who "moves his agricultural pursuits inside his house has similarly manifested a subjective expectation of privacy . . . ." *Kyllo*, 140 F.3d at 1253.

60. *See Kyllo*, 140 F.3d at 1253.

61. *See id.* at 1253-54.

62. *See id.* at 1255.

63. *See id.* at 1254-55.

64. *See Cusumano*, 67 F.3d at 1501.

65. *See id.* at 1501-02.

Similarly, the instant court rejected an analysis based on the physical means by which law enforcement gathered information on Appellant, and instead focused on Appellant's privacy in activities within the home.[66] Such a focus more closely follows *Katz* than the waste heat approach adopted in the four circuits which found no Fourth Amendment violation for thermal imager scans.[67]

The instant court's approach to the first prong of the *Katz* test successfully addresses the question of advancing technology. As the *Cusumano* court pointed out, when technology progresses, secrets that society once assumed were "safely beyond the perception of the government" become subject to exposure.[68] At the same time, however, citizens are usually unaware of the various advancements in technology, particularly as they relate to surveillance. Therefore, an individual's ability to manifest a subjective expectation of privacy for a particular type of intrusion becomes almost impossible.[69]

The instant court's treatment of the first prong of *Katz* avoids the problem of advancing technology. As the instant court recognized, *Katz* held that a defendant could manifest a subjective expectation of privacy although he had not taken every precaution against electronic eavesdropping.[70] Therefore, Appellant's apparent failure to guard against a thermal imager scan, provided he even knew such technology existed, did not prevent the court from finding that Appellant manifested a subjective expectation of privacy.[71]

The court's reliance on *Ciraolo*[72] also demonstrates that an individual does not have to take extraordinary precautions to manifest a subjective expectation of privacy. Like the defendant in *Ciraolo*, the appellant in the instant case did not successfully shield his agricultural pursuits from government detection.[73] However, the instant court did not require Appellant to take any other steps, aside from locating his grow operation inside, to guard against the specific type of government observation, namely a thermal scan.[74] Thus Appellant's lack of protection against a thermal imager did not preclude him from manifesting a privacy

66. *See Kyllo*, 140 F.3d at 1253.

67. *See* cases cited *supra* note 45.

68. *Cusumano*, 67 F.3d at 1505.

69. Professor LaFave best described this problematic result as "one cannot have an expectation of privacy unless safeguards have been put in place that ensure against even purely hypothetical means of intrusion upon privacy." LaFave, *supra* note 25, at 298.

70. *See Kyllo*, 140 F.3d at 1253.

71. *See id.* at 1252-53.

72. *See id.*

73. *See id.*

74. *See id.*

expectation.[75]

The instant court's analysis of the second prong of *Katz* also minimizes the criticism of the *Katz* test regarding advancing technology.[76] Although the instant court analyzed the detail with which an imager could "see" the interior of a house, the court did not base its finding solely on the ability of the imager to reveal intimate details.[77] The instant court recognized that any detail regarding the interior of a home was sufficient to give rise to Fourth Amendment protection.[78]

By recognizing that the most basic details of the home are sufficiently "intimate" to give rise to Fourth Amendment protection,[79] the instant court assured that an individual's privacy expectation will remain reasonable even when thermal imagers become more common. By recognizing that an individual's expectation of privacy for any activity within the home is virtually presumptively reasonable, the instant court protected these activities from any type of government monitoring. Therefore, no matter how common thermal imagers become, the court would still recognize an individual's reasonable expectation of privacy in the activities conducted within the home.

The split in the circuits regarding the constitutionality of thermal imaging is one which should be resolved by the United States Supreme Court. In the face of rapidly advancing technologies, the Supreme Court should develop a unified method for analyzing Fourth Amendment issues regarding the use of this technology by the government. The approach to the *Katz* test taken by the instant court ensures the protection of domestic activities from intrusive future technology. By resolving this circuit split and adopting the reasoning of the instant court, the Supreme Court would preserve the right of individuals to "retreat into . . . [the] home and there be free from unreasonable governmental intrusion."[80]

75. *See id.*
76. *See* Katz, *supra* note 25, at 564-65; LaFave, *supra* note 25, at 309-10.
77. *See Kyllo*, 140 F.3d at 1254-55.
78. *See id.*
79. *See id.* at 1255.
80. *Silverman*, 365 U.S. at 511.