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Eyes in the Sky, the Fourth Amendment in the Age of Aerial Surveillance

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On May 19, 1986, the United States Supreme Court handed down two decisions limiting the constitutional right to be free from aerial surveillance. The first decision, California v. Ciraolo,\(^1\) dealt with a private residence; the second, Dow Chemical v. United States,\(^2\) involved aerial surveillance of a commercial enterprise. Both of the decisions upheld the government's use of aerial surveillance in situations which previously would have been considered to be constitutionally prohibited searches. In California v. Ciraolo,\(^3\) the Santa Clara, California, police received an anonymous tip that marijuana plants were present in respondent's backyard. The yard was surrounded by two fences, a six-foot outer fence and a ten-foot inner fence. These fences prevented ground-level observation of the respondent's yard. Police officers, who were experienced in marijuana identification, obtained the use of a small plane and flew over respondent's house at an altitude of 1,000 feet,\(^4\) identifying marijuana plants growing in the yard.\(^5\) A search warrant was obtained on the strength of the officer's observations. The warrant was executed and marijuana plants seized. Respondent pled guilty to cultivation of marijuana when the trial court refused to grant his motion to suppress the evidence of the search.\(^6\)

The trial court was reversed by the California Court of Appeals on the ground that the warrantless aerial surveillance of respondent's backyard was a violation of respondent's fourth amendment rights.\(^7\) The California Court of Appeals held that respondent's marijuana was within the curtilage of his home, and therefore the marijuana was within an area where respondent's expectation of privacy is recognized by society. The court reached its conclusion by holding that the existence of the two fences was sufficient

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4. Federal regulations require aircraft to be at least 500 feet above the ground at all times when not in the process of landing or taking off, and at least 1,000 feet above the nearest obstacle within a horizontal radius of 2,000 feet of the aircraft when in "congested" areas. 14 C.F.R. § 91.79(b), (c) (1986). Helicopters have no fixed minimum height, the only requirement being that they must be operated without hazard to person or property. 14 C.F.R. § 91.79(d) (1986).
5. 106 S. Ct. at 1810-11.
6. Id. at 1811.
evidence of a subjective expectation of privacy. The California court also considered it significant that the surveillance of respondent's backyard was the result of focused observation, directed only at his yard, and was not the result of "a routine patrol conducted for any other legitimate law enforcement or public safety [reason]. . . ." The California Supreme Court denied the state's petition for review.10

The United States Supreme Court reversed the California court.11 The Supreme Court invoked the two-part test first enunciated in Katz v. United States.12 The first consideration of the Katz test is whether there is evidence of a subjective expectation of privacy in the area searched; the second consideration is whether society is willing to recognize that expectation of privacy as one which is reasonable.13

Addressing the issue of whether respondent had exhibited a subjective expectation of privacy, the Court agreed with the California Court of Appeals that respondent had clearly met the test of exhibiting a subjective expectation of privacy, but the Court qualified its finding with the phrase, "So far as the normal sidewalk traffic was concerned. . . ."14

The Court then addressed the second portion of the Katz analysis, whether respondent's expectation of privacy is one that society is willing to recognize as reasonable. In addressing the issue of reasonableness, the Court first noted that the area in question was certainly within the curtilage of respondent's home, but the Court noted that even that area is not protected from all forms of observation.15 The Court stated, "What a person

8. 161 Cal. App. 3d at 1089, 208 Cal. Rptr. at 97.
9. 161 Cal. App. 3d at 1089-90, 208 Cal. Rptr. at 97.
10. 106 S. Ct. at 1811.
11. Id. at 1813.
13. Id. at 361 (Harlan, J., concurring).
14. 106 S. Ct. at 1812. This may be an indication that the Court would not have found a subjective expectation of privacy from aerial surveillance without actual efforts to screen the yard from aerial observation. The Court noted, "Whether respondent therefore manifested a subjective expectation of privacy from all observations of his backyard, or whether instead he manifested merely a hope that no one would observe his unlawful gardening pursuits, is not entirely clear in these circumstances." Id.
15. Id. This raises the issue of the "open view" doctrine, which states that what a person knowingly exposes to the public is not subject to fourth amendment protection. See, e.g., Katz v. United States, 389 U.S. 347, 351 (1967) ("What a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection."). Under the analysis presented in Katz, there would be a lack of an actual, subjective expectation of privacy by failing to take measures to conceal the activities from the public view; and a lack of a "reasonable" expectation of privacy, since the activities were exposed to the public.
knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection." 16

Where the Supreme Court disagreed with the California Court of Appeals was on the issue of whether respondent had knowingly exposed the curtilage of his home to the public, as described in Katz. 17 The California court had taken the position that there was a difference between exposing one's property to the chance of observation by public flights or routine police patrols and the surveillance of one's property by focused surveillance. 18 The Supreme Court refused to recognize this distinction, finding that navigable airspace is open to the public and that any member of the public could have done exactly what the police officers did. Therefore, respondent's expectation of privacy was unreasonable and not one that society was prepared to honor. 19 The Supreme Court considered navigable airspace to be comparable to a public highway, treating it as a lawful vantage point from which police officers could observe activities on the ground. 20

Justices White, Rehnquist, Stevens, and O'Connor joined in the majority opinion written by Chief Justice Burger, which stated, "The Fourth Amendment simply does not require the police traveling in the public airways at this altitude to obtain a warrant in order to observe what is visible to the naked eye." 21 Justice Powell wrote a dissenting opinion, joined by Justices Brennan, Marshall and Blackmun. 22 The dissenting opinion questions the majority's conclusion that simply because airspace is open to the public there can be no reasonable expectation of privacy from aerial observation. 23 The dissenting opinion quoted Oliver v. United States 24 as holding that one consideration in determining the legitimacy of an expectation of privacy is "our societal understanding that certain areas deserve the most scrupulous protection from government invasion." 25

The dissenting opinion noted that one's home has traditionally been the most protected area, where there is virtually always a legitimate expectation of privacy, 26 and that the curtilage has traditionally been treated as part of the home. 27

19. 106 S. Ct. at 1813.
20. Id.
21. Id.
22. Id. at 1814 (Powell, J., dissenting).
23. Id.
25. Id. at 178.
The dissenting opinion broke from the majority opinion on the question of whether persons exposing their homes to observation by public air travelers sacrifice any reasonable expectation of privacy from aerial surveillance, including purposeful aerial observation aimed at a particular target. The dissent believed that while it may be true that there is a risk of observation from aircraft, in general the possibility of someone on a typical commercial or private aircraft observing private activities on the ground and connecting them with a particular person is so small as to be "virtually nonexistent." The dissent noted that while it is true that activities within the curtilage may be exposed to observation from the air, the public is not there for that purpose, creating a qualitative difference between public use of the airways and intentional surveillance from the air, a difference that the majority opinion refused to recognize. Since the dissent would find a reasonable expectation of privacy from intentional aerial surveillance in respondent's yard, they would affirm the California Court of Appeals in suppressing the evidence obtained as being the result of an illegal search and seizure.

On the same day it decided California v. Ciraolo, the Supreme Court handed down its decision in Dow Chemical v. United States. This case involved the Environmental Protection Agency's (EPA) use of aerial photography to observe the interior of Dow's 2,000 acre manufacturing complex in Midland, Michigan. Dow also involved questions of whether the EPA was authorized to conduct aerial surveillance and whether Dow was protected by trade secrets laws, but only the aerial surveillance issues will be discussed in this Note.


27. 106 S. Ct. at 1816 (Powell, J., dissenting); see, e.g., United States v. Roberts, 747 F.2d 537 (9th Cir. 1984) (reaffirmed the concept of curtilage as the determining factor in deciding whether a fourth amendment search had taken place); National Org. for Reform of Marijuana Laws (NORML) v. Mullen, 608 F. Supp. 945 (N.D. Cal. 1985) (fourth amendment protection did not extend to open fields, but curtilage was protected).

29. Id. at 1818.
30. Id.
31. Id. at 1819.
32. 106 S. Ct. 1809 (1986).
34. Id. at 1822-23.
35. Id. at 1823-24.
36. Id. at 1823.
The EPA had been engaged in a longstanding dispute with Dow over emissions from generators located in the complex.\(^{37}\) When the EPA requested an on-site inspection in early 1978, Dow refused on the ground that the EPA intended to photograph portions of the plant and Dow was concerned about the possible loss of trade secrets.\(^{38}\) Rather than seek an administrative search warrant, the EPA arranged for a private aerial photography firm to take photographs of the site.\(^{39}\) The plane used by the firm made several passes over Dow's plant, staying within navigable airspace at all times and taking photographs from various altitudes.\(^{40}\) The equipment used to take the photographs was a $22,000 aerial mapping camera, described as the "finest precision aerial camera available."\(^{41}\) After learning of the photography from the firm hired by the EPA, Dow brought suit in the district court to prevent further aerial photography and to prevent them from disseminating, releasing or copying the photographs already taken.\(^{42}\) The trial court found that Dow had a reasonable expectation of privacy in the plant area because of its extensive security measures.\(^{43}\) Finding a reasonable expectation of privacy, and subjective manifestations of this expectation, the trial court found in favor of Dow.\(^{44}\)

The decision of the trial court was reversed by the court of appeals.\(^{45}\) The court of appeals found that while Dow had an expectation of privacy from ground-level searches, it had failed to protect itself from aerial searches. The court of appeals further held that the concept of curtilage does not apply to large industrial complexes, holding that these complexes are more like "open fields" as described in *Oliver v. United States*.\(^{46}\)

In examining the fourth amendment implications of this case, the Supreme Court first determined whether the concept of curtilage could be applied to a large industrial complex such as Dow's, and if the area was protected by the fourth amendment, whether the use of the sophisticated aerial photography equipment was permissible.\(^{47}\) In considering the question

\(^{37}\) *Big Brother Strikes Again*, FORBES, May 12, 1980, at 51.

\(^{38}\) 106 S. Ct. at 1822.

\(^{39}\) *Id.*

\(^{40}\) *See supra* note 4.


\(^{42}\) *Id.* at 1356.

\(^{43}\) Dow had built an eight-foot high fence around the entire property, had motion detectors around the complex to detect intruders, a complete ban on cameras at all times in the complex and a normal security force of fifty people on duty at all times. In addition, the sensitive areas were placed near the center of the 2,000 acre complex and surrounded with buildings to screen them from sight. *Id.* at 1364-65.

\(^{44}\) *Id.* at 1375.


\(^{47}\) 106 S. Ct. at 1825.
of whether the concept of "industrial curtilage" is valid, the Court limited its discussion to whether or not areas within the "industrial curtilage" are protected from aerial observation by the fourth amendment. The Court found that the compelling reasons for protecting the area surrounding a private home from surveillance are not present in a case involving a commercial complex, and that these complexes are more analogous to "open fields" than they are to the curtilage of a private dwelling. Since it is well established that "open fields" may constitutionally be subjected to government searches by means of aerial surveillance, the Supreme Court affirmed the court of appeals' finding that the EPA's use of aerial surveillance was constitutionally permissible in this situation.

Justice Powell wrote a dissenting opinion, joined by Justices Brennan, Marshall and Blackmun. In their dissenting opinion, the Justices disagreed with the majority's decision that Dow had no reasonable expectation of privacy in the interior of their manufacturing complex because it more closely resembled an "open field" than the curtilage of a private home. In their opinion, the complex resembled neither, and should have been dealt with on its own merits rather than trying to pigeonhole it into unsuitable categories. According to the dissent, the majority attempted to describe Dow's complex as an "open field," but also found that Dow did enjoy a constitutional right to privacy from ground-level searches in the same area. Under previous analyses, once an area was categorized as an "open field," there was no reasonable expectation of privacy either from aerial or ground searches. In addition, the dissent felt the majority's position was mistaken in reasoning that the use of an aerial mapping camera presented no constitutional problems because it was only an enhancement of human vision.

48. The Court failed to address the issue of whether these areas are protected from ground-level observation. Id. at 1826-27.
49. Id. at 1826-27.
50. See Oliver v. United States, 466 U.S. 170 (1984), where the Court held that, as a matter of law, there can be no legitimate expectation of privacy in an area categorized as an "open field."
51. As for the issue of whether the use of an aerial mapping camera created any complications, the Court found that the camera merely enhanced human eyesight and raised no constitutional problems. 106 S. Ct. at 1827; see generally cases cited infra note 54.
52. 106 S. Ct. at 1830.
53. Id. at 1833.
54. See, e.g., United States v. Karo, 468 U.S. 705 (1984) (use of telescope to observe the interior of an apartment was unconstitutional without a warrant); People v. Sneed, 32 Cal. App. 3d 535, 108 Cal. Rptr. 146 (1973) (use of helicopter to observe marijuana plants otherwise concealed not allowed). But see United States v. Dubrofsky, 581 F.2d 208, 211 (9th Cir. 1978) (allowed use of "[b]inoculars, dogs that track and sniff out contraband, search-lights, fluorescent powders, automobiles and airplanes, burglar alarms, radar devices, and bait money. . ."); United States v. Moore, 562 F.2d 106, 112 (1st Cir. 1977) (allowed use of "helicopter, binoculars,
The dissent would find that Dow was entitled to a reasonable expectation of privacy in the interior of their manufacturing complex, and that the use of sophisticated aerial photography was an illegal search when done without a warrant. In order to understand the effects of these decisions on the law, it is helpful to first trace the evolution of fourth amendment analysis. Before the decision in *Katz v. United States*, the determination of whether fourth amendment protection was available was made primarily on the basis of "constitutionally protected areas." This analysis was structured in terms of property law, because it was based on the language of the Constitution which protected "persons, houses, papers and effects." Therefore, fourth amendment protection was dependent upon a physical trespass of a constitutionally protected area. During this period, the curtilage was recognized as being the area surrounding the house, in which private activities took place, and was regarded as being a portion of the house itself. Therefore, prior to *Katz*, the curtilage was a "constitutionally protected area" and any trespass onto the curtilage was a violation of fourth amendment protection. *Katz v. United States* was a turning point in fourth amendment analysis. The Court in *Katz* held that "the Fourth Amendment protects people, not places," Justice Harlan's concurring opinion, which

55. 106 S. Ct. at 1834. The dissent would apply the *Katz* analysis and find that Dow had exhibited an actual, subjective expectation of privacy, and that society was willing to recognize that expectation as being legitimate.


58. The fourth amendment provides:

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.

U.S. Const. amend IV.

59. See supra note 55.


61. See, e.g., *Hodges v. United States*, 243 F.2d 281 (5th Cir. 1957) (warrantless search of chicken house constitutional because chicken house not within curtilage); *Walker v. United States*, 225 F.2d 447 (5th Cir. 1955) (warrantless search of barn not constitutional because barn was within the curtilage).

62. 389 U.S. 347 (1967). *Katz* involved governmental eavesdropping on a conversation taking place in a public telephone booth. The parties framed the case in terms of whether the phone booth was a "constitutionally protected area," but the court rejected that analysis, choosing instead to announce a new line of analysis.
has been adopted by succeeding courts, laid out a test involving two inquiries. First, a court is to decide whether the person involved had exhibited "an actual (subjective) expectation of privacy," and second, the court must decide whether society is willing to recognize that expectation of privacy as one that is reasonable. This analysis led the courts away from the property concepts focused on earlier, and concentrated their analysis instead on the acts of the individual and society's attitudes towards those acts. Many courts began to dismiss the concept of curtilage as being either antiquated or unduly conclusory.

The next major step in analyzing fourth amendment protection of the curtilage occurred in Oliver v. United States. Oliver did not overturn the analysis presented in Katz, but added another step to it. The Court in Oliver once again looked to the language of the fourth amendment to describe the limits of constitutional protection, finding that the "reasonable" expectation of privacy described in Katz could only be found in one's "person, houses, papers, and effects." The Court held that if the area involved was not within the curtilage, then, as a matter of law, there could be no legitimate expectation of privacy and therefore, no fourth amendment protection. This introduced a threshold determination. A court must decide that the area involved is within the curtilage before it would be allowed to

64. Id. at 361.
65. See, e.g., United States v. Broadhurst, 805 F.2d 849, 855 n.7 (9th Cir. 1986) ("The post-Katz extension of Fourth Amendment protection reflects Katz 'teaching that determination of these questions turns on the degree of privacy which the individual is seeking to preserve, rather than upon resort to the 'ancient concept of curtilage.'"); People v. Sneed, 32 Cal. App. 3d 535, 541, 108 Cal. Rptr. 146, 149 (1973) ("We do not believe . . . that since the advent of the [Katz] 'reasonableness' test . . . answers can be found in a Procrustean application of these [open fields versus curtilage] doctrinaire pronouncements").
66. 466 U.S. 170 (1984). This case involved a warrantless search of a field after police officers, acting on a tip, drove past appellant's house and passed through a locked gate with a "No Trespassing" sign. Id. at 173. The officers entered appellant's property and found marijuana plants growing in a field over a mile from his home. Id. Appellant was arrested for their cultivation. Id. The district court suppressed the marijuana, applying the test described in Katz v. United States, 389 U.S. 347 (1967), and finding that the defendant had a reasonable expectation of privacy based on the "No Trespassing" signs, the fencing of the field and the secluded location of the marijuana plants which caused the field to not fall within the "open field" exception to the fourth amendment. Id. at 173-74. The court of appeals reversed, holding that the open fields doctrine of Hester v. United States, 265 U.S. 57 (1924), which allows police officers to enter and search fields outside the curtilage, was not superseded by the holding in Katz. Id. at 174. The United States Supreme Court affirmed the court of appeals, holding that the test described in Katz simply did not come into effect if the area in question was outside the curtilage. Id. at 180-81.
68. Id. at 180.
consider whether there had been a subjective expectation of privacy and, if so, whether that expectation was one society is prepared to recognize as being legitimate.  

The courts have had a great deal of difficulty dealing with the issue of aerial surveillance within the framework of Oliver and Katz. As noted in Katz, "What a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection." Today, with increasing air traffic of all kinds, is all outdoor activity knowingly exposed to observation from the sky? The courts which have had to deal with this issue have used a number of different analyses in an attempt to answer this question.

When examining the requirement of a subjective expectation of privacy, courts have basically used two approaches. The first considers whether the party has attempted to make his activities secure from ground-level observation. If the party has made his activities secure from observation from the ground, he has satisfied the requirement of a subjective expectation of privacy. This was the approach used by the California Court of Appeals in California v. Ciraolo. The California court found that by erecting two fences, one of which was ten feet high, Ciraolo exhibited an expectation of privacy. The second approach courts have taken looks to whether the

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69. Id. at 178-80.
71. 389 U.S. at 351.
72. See generally Note, supra note 70.
73. See, e.g., State v. Grawien, 123 Wis. 2d 428, 367 N.W.2d 816 (Wis. Ct. App. 1985) (court should focus on whether defendant has taken steps to protect his privacy from ground-level observation); People v. Cook, 41 Cal. 3d 373, 221 Cal. Rptr. 499, 710 P.2d 299 (1985) (shielding of yard from ground-level observation gives reasonable expectation of privacy from aerial surveillance).
75. 161 Cal. App. 3d at 1089; 208 Cal. Rptr. at 97.

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party has attempted to conceal his activities from observation from the air.\(^{76}\) This second standard is far more rigorous and one that few parties would be able to meet, particularly if they wished to preserve their yards as outdoor areas. After determining that there is a subjective expectation of privacy under either of the above tests, a court prior to \textit{Dow} and \textit{Ciraolo} would then address the issue of whether the party’s expectation of privacy was one that society was willing to recognize as being legitimate.\(^{77}\) Prior to the present case, there have been two basic approaches to answering this question. The first examines the reasonableness of the aerial surveillance, examining a number of factors to reach a decision.\(^{78}\) The second group of cases came from courts that viewed aerial surveillance as considerably more of a threat to privacy. These courts found that the warrantless use of aerial surveillance was unreasonable as a matter of law.\(^{79}\)

Again, this was the approach taken by the California Court of Appeals in \textit{Ciraolo}.\(^{80}\) There, the court found that warrantless aerial surveillance of the curtilage was unconstitutional due to the special concern with which

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  \item[76.] See, e.g., United States v. Broadhurst, 805 F.2d 849 (9th Cir. 1986) (police observed marijuana plants through translucent greenhouse); State v. Stachler, 58 Haw. 412, 570 P.2d 1323 (1977).
  \item[77.] See, e.g., discussion in United States v. Allen, 675 F.2d 1373, 1381 (9th Cir. 1980) (no reasonable expectation of privacy due to location near sea-coast and presence of routine over-flights).
  \item[78.] Some of the factors considered include whether the surveillance was conducted from a height in compliance with regulations setting minimum heights for planes, whether planes commonly flew over the area, the duration of the surveillance, and whether equipment was used to enhance the senses of the observers, such as telescopes or cameras. See \textit{supra} note 4; see, e.g., United States v. Allen, 675 F.2d 1373 (9th Cir. 1980) (Coast Guard flights were routine over area, and objects observed were buildings) (discounting use of telephoto lens); National Org. for Reform of Marijuana Laws (NORML) v. Mullen, 608 F. Supp. 945 (N.D. Cal. 1985) (aerial surveillance enjoined due to repeated observation from extremely low altitudes, use of helicopters to look through windows of homes, harassment of people on the ground); People v. Agee, 153 Cal. App. 3d 1169, 200 Cal. Rptr. 827 (1984) (used federal aviation regulations to determine lawfulness of overflight).
  \item[79.] Although not explicitly holding to this rule, in State v. Fierge, 673 S.W.2d 855 (Mo. Ct. App. 1984), the Eastern District Court of Appeals addressed the issue of aerial surveillance and found that “if we find that the patch is within the curtilage, then fourth amendment protections should be invoked.” \textit{Id.} at 856. This would seem to indicate that the Court would not have allowed warrantless aerial surveillance of the curtilage. However, the court found that the curtilage was defined by the outer walls of the outbuildings and in this case the marijuana plants in question were growing against the outer wall of an outbuilding, placing them just outside of the curtilage and into the area of “open fields,” where there was no reasonable expectation of privacy. \textit{Id.} at 856-57. This case demonstrates the problem with the mechanical application of rules. Had the plants been only a few feet away, growing against the side wall of the outbuilding, they would have been within the curtilage, and, presumably, protected from aerial surveillance. \textit{Id.} at 856.
  \item[80.] 161 Cal. App. 3d 1081, 208 Cal. Rptr. 93 (1984).
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the law protects the sanctity of the home. In its decision in *Ciraolo*, the Supreme Court seems to have adopted the first line of reasoning, examining the reasonableness of the surveillance, and goes even further by saying that there is no reasonable expectation of privacy from naked-eye aerial surveillance from navigable airspace; that is, surveillance done without physical trespass. The Court did note that there may be circumstances where the technology became so intrusive as to raise fourth amendment considerations, but failed to give any examples of what might be prohibited.

In addition, the Court seems to be making a distinction between commercial property and residential property, holding that residential property may be entitled to greater protection from aerial surveillance than commercial property. The impression left from these cases is that more sophisticated forms of surveillance will be permitted when directed towards commercial property than when directed towards residential property. In both *Dow* and *Ciraolo*, the Court resurrected an issue that had long been thought put to rest by placing emphasis on the fact that the EPA conducted its surveillance with no physical trespass. It had seemed that the Court in *Katz* had answered the question of the necessity of a physical trespass once and for all, but now the Court is again placing emphasis on the non-occurrence of a physical trespass. As Justice Stewart noted in the majority

81. *Id.* at 1089, 208 Cal. Rptr. at 97; see also People v. Agee, 153 Cal. App. 3d 1169, 200 Cal. Rptr. 827 (1984) (reasonable expectation of privacy in curtilage extends to aerial surveillance).

82. 106 S. Ct. 1809 (1986).

83. 106 S. Ct. at 1814 n.3. The Court cited the petitioner's brief as saying "[a]erial observation of curtilage may become invasive, either due to physical intrusiveness or through modern technology which discloses to the senses those intimate associations, objects or activities otherwise imperceptible to police or fellow citizens." Brief for Petitioner 14-15. Note, however, that a sophisticated aerial mapping camera mounted in a specially modified airplane does not fall into this category, at least when used to observe commercial property. See *Dow Chemical Co. v. United States*, 106 S. Ct. 1819 (1986). In *Dow*, the Court did note that the use of something as sophisticated as satellite technology might be prohibited without a warrant. 106 S. Ct. at 1826.

84. The Court noted "[w]e find it important that this is not an area immediately adjacent to a private home, where privacy expectations are most heightened." 106 S. Ct. at 1826 n.4.

85. In *Dow*, the Court quoted with approval Donovan v. Dewery, 452 U.S. 594, 598-99 (1981), as saying 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 sanctity accorded an individual's home." 106 S. Ct. at 1826.

86. "The observations by Officers Shutz and Rodriguez in this case took place in public navigable airspace . . . in a physically nonintrusive manner." 106 S. Ct. at 1813 (citation omitted). "Any actual physical entry by EPA into any enclosed area would raise significantly different questions. . . ." 106 S. Ct. at 1826.

opinion in *Katz*, the protection provided by the fourth amendment would be of little consequence in an era of electronic and optical sophistication if its protection "turn[ed] upon the presence or absence of a physical intrusion into any given enclosure."\(^8\)

The Court did attempt to retreat from the physical trespass theory to some extent by saying that "surveillance of private property by using highly sophisticated surveillance equipment not generally available to the public, such as satellite technology, might be constitutionally proscribed absent a warrant."\(^9\) "But," they continued, "the photographs here are not so revealing of intimate details as to raise constitutional concerns."\(^9\) Testimony had revealed that by enlarging the photographs, certain items as small as one-half inch in diameter were visible.\(^9\) Apparently the Court felt that because the photographs had, in fact, captured no "identifiable human faces or secret documents," there had been no violation of privacy.\(^9\) However, Dow was not attempting to protect the faces of their employees, or documents, they were attempting to protect their manufacturing processes, which could be determined from an analysis of the photographs.\(^9\) The Court is risking the gradual decay of fourth amendment protection through technological advances that the dissenting opinion in *Dow* warned of\(^9\) by focusing on the technological sophistication of the surveillance devices, and their availability to the public. A few years from now we could have observation by the use of "conventional" orbiting infra-red or gamma-ray detectors, which, if not particularly advanced for their era, would be acceptable by this standard.\(^9\) Another issue raised by the standard presented in this case of acceptability of surveillance technology being dependent on its availability to the public is the fact that the fourth amendment was not intended to protect against surveillance by other members of the public.

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\(^8\) *Id.* at 353.
\(^9\) 106 S. Ct. at 1826.
\(^9\) *Id.* at 1826-27.
\(^9\) 536 F. Supp. 1355, 1357 (E.D. Mich. 1982). In the majority opinion, the Supreme Court attempted to discount the detail revealed by the photos by noting that details of this size were only visible due to contrast against the snow on the ground at the time, noting that there were no "identifiable human faces or secret documents captured. . . ." 106 S. Ct. at 1827 n.5.
\(^9\) 106 S. Ct. at 1827 n.5.
\(^9\) *Id.* at 1822.
\(^9\) In *Dow*, the Court placed emphasis on the fact that the means of surveillance (a $22,000 aerial photography camera permanently mounted in an airplane) was "generally available to the public." The logical conclusion from the language used by the court is that means of surveillance "generally available to the public" will be acceptable. 106 S. Ct. at 1826-27; see also *id.* at 1833 (Powell, J., dissenting).
but against surveillance by the government. Why the public should be the arbiter of what technology the government may use is not made clear in the cases, and raises questions of whether the Court might have lost sight of the focus of the fourth amendment. While people are normally concerned with what is displayed to public view, it is not other members of the public who threaten them with arrest and prosecution, but rather, the government. The dangers presented by the general public are minimal compared to the risks presented by the government learning of one's activities, hence the fourth amendment's protection against governmental but not private searches and seizures. The use of a "public availability" standard for surveillance technology raises the specter of the gradual deterioration of the protection provided by the fourth amendment as increasingly sophisticated technology becomes more commonly available.

In Katz, the Court had shifted from the traditional mechanical rules and had focused fourth amendment analysis on the reasonableness of an individual's expectation of privacy from surveillance. In these decisions, the Court is once again describing a mechanical test, that whatever can be detected from a public vantage point without physical trespass is "fair game" unless measures are taken to shield it from prying eyes. While superficially this rule may be attractive, when examined closely there are a number of ramifications.

The main concern is the fact that for an individual to protect his claim to an expectation of privacy, he is required to take measures which would have only one purpose, to shield against aerial surveillance. By requiring parties to guard against particular forms of surveillance to protect their right to privacy, the Court has seriously limited the protection offered by the fourth amendment. For example, applying this rule to the facts in Katz, the Court might well have reasoned that there was no physical trespass and that Katz had failed to take any measures to prevent his conversations from being overheard by electronic listening devices, thus abandoning his claim to an expectation of privacy in his conversations.

The other problem with this rule is the fact that any measures to protect oneself against aerial surveillance would be unreasonable in the light of

96. See supra note 58.
102. The Court in Dow did note that one important factor was that the public had access to the airways and to aerial photography equipment. 106 S. Ct. at 1823. Today, there are a number of suppliers providing electronic surveillance equipment to the general public, so there is a possibility that this too will be considered routine.
everyday experience. While it may be convenient and simple to close doors or pull curtains shut to maintain privacy from outside observers, it would hardly be reasonable or feasible to enclose outdoor living areas to protect them from observation from the air, and to do so would be to destroy their value as outdoor areas.

In order to comply with this standard, Mr. Ciraolo would have had to cover his backyard with an opaque shield to prevent observation, in effect, enclosing his backyard. Dow Chemical Company would have been forced to cover their manufacturing complex.\textsuperscript{103} While both of these alternatives are theoretically possible, they are certainly inconsistent with the uses the parties had in mind. A covered backyard is not a backyard at all, it becomes merely another room in one's house.

In \textit{Katz},\textsuperscript{104} the Court stressed that there was no place in fourth amendment analysis for mechanical rules, and that the standard should be one of "reasonableness." In these two decisions, the Court backs away from that standard. Rather than examining what measures would be reasonable for an individual to take to protect his activities from police observation, the Court returns to a mechanical test; that is, whether the defendant had managed to shield his activities from observation from the sky.\textsuperscript{105} Since the

\textsuperscript{103} The dissenting opinion notes that one of the main reasons for not covering the plant, aside from enormous costs, was worker safety. The chemicals used in the manufacturing process are highly toxic and explosive and would have been extremely hazardous if confined inside a building. 106 S. Ct. at 1828 n.1 (Powell, J., dissenting).

\textsuperscript{104} 389 U.S. 347 (1967).

\textsuperscript{105} In United States v. Broadhurst, 805 F.2d 849 (9th Cir. 1986), decided after \textit{Ciraolo} and \textit{Dow}, the court of appeals said that an attempt to conceal one's activities from aerial observation was not sufficient; the activities must actually be concealed. In \textit{Broadhurst}, the defendant had constructed a greenhouse with metal roofing, translucent siding and a caretaker to raise and lower screens over the side of the building. \textit{Id.} at 854. The police officers testified that they were able to observe "shadows, shapes of plants, and shades of green... 'consistent with marijuana.'" \textit{Id.} at 850. The court of appeals held that they had observed what any member of the public could have seen by flying over defendant's property, and therefore, there was no reasonable expectation of privacy. \textit{Id.} at 856. The court made the following observation: "'The Constitution does not require one to build an opaque bubble over himself to claim a reasonable expectation of privacy. Where the bubble he builds, however, allows persons in navigable public airspace to view his illicit activity, whatever expectation of privacy he has is certainly not reasonable.'" \textit{Id.} at 856 (citations omitted). These two sentences create an interesting paradox. On the one hand, the court is saying that there is the possibility of a reasonable expectation of privacy. On the other hand, if the activity can be seen, the expectation is not reasonable. Thus, if the activity is never observed, one has a reasonable expectation of privacy, but need never claim it. If however, the activity is observed, resulting in arrest, one would not be allowed to claim an expectation of privacy. See also, United States v. Allen, 675 F.2d 1373 (9th Cir. 1980) (finding that appellants had no reasonable expectation of privacy from aerial surveillance using sense-enhancing devices such as binoculars and telephoto lenses).
only reasonable measures most people could take to maintain their privacy would be to screen their property from ground level view, the Court is denying fourth amendment protection to the vast majority.

In effect, the Court seems to be taking the doctrine introduced in Oliver, that there is no reasonable expectation of privacy in open fields as a matter of law, and extending it to aerial observation of the curtilage, creating a different standard of protection for the curtilage when it is viewed from the air than when it is viewed from the ground, finding that whatever is in "plain view" has no fourth amendment protection.

The issue of what constitutes "plain view" is left unresolved, whether sophisticated surveillance technology may be used, how sophisticated it may be, and under what circumstances it may be used. Apparently, the Court has created a dichotomy between commercial and private property with regard to the degree of technological sophistication that may be employed in aerial surveillance, allowing more intrusive observation of commercial property than of private property.106

In Dow, the Court narrowed the definition of curtilage, and increased the areas in which it would consider expectations of privacy to be presumptively unreasonable.107

These two cases evidence a significant retreat from the case-by-case analysis of the reasonableness of expectations of privacy set out in Katz, and a significant narrowing of the scope of the protection offered by the fourth amendment.

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106. See supra notes 84-85.