THREATSENSE TECHNOLOGY: SNIFFING TECHNOLOGY AND THE THREAT TO YOUR FOURTH AMENDMENT RIGHTS

Comment*

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After each perceived security crisis ended, the United States has remorsefully realized that the abrogation of civil liberties was unnecessary. But it has proven unable to prevent itself from repeating the error when the next crisis comes along.

- Justice William J. Brennan

Those who would give up essential liberty to purchase a little temporary safety deserve neither liberty nor safety.

- Benjamin Franklin

There was of course no way of knowing whether you were being watched at any given moment. How often, or on what system, the Thought Police plugged in on any individual wire was guesswork. It was even conceivable that they watched everybody all the time. But at any rate they could plug in your wire whenever they wanted to. You had to live—did live, from habit that became instinct—in the assumption that every sound you made was overheard, and, except in darkness, every movement scrutinized.

- George Orwell, 1984

I. INTRODUCTION: BALANCING SECURITY AND LIBERTY IN A POST 9-11 WORLD

In a post 9-11 world, the "master metaphor" heard continuously in academic debates is the necessary tradeoff between security and liberty.[1] Richard Posner supports this metaphor, stating: "One pan contains individual rights, the other community safety, with the balance needing and receiving readjustment from time to time."[2] This debate, in recent years, has polarized the nation into two camps: some believe we should sacrifice all rights for national security and support unrestrained executive discretion, and then there are those who support the maintenance of civil liberties during wartime and who are continually viewed as giving aid and comfort to the enemy.[3] This long-standing debate between liberty and security is nothing new.[4] The Federalists and Anti-Federalists in the early 1800s had the same debates: "[o]ne party was accused of . . . exaggerating national security concerns, trampling freedom of speech and press . . ." while the other party was accused of "weakening America's military readiness . . . ."[5] In the liberty-security tradeoff at airports, Stephen Holmes notes, "[a]nyone who has passed through airport security knows what it means to sacrifice comfort and convenience as an individual in order to avoid being murdered in a group."[6]

Recently, this nation faced another terrorism scare. Umar Farouk Abdulmutallab allegedly ignited an explosive device after boarding a Northwest Airline flight that was to depart from Amsterdam and land in Detroit on December 25, 2009.[7] Umar Farouk Abdulmutallab later told authorities that "he had had explosive powder taped to his leg and used a syringe of chemicals to mix with the powder that was to cause [an]

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1. Stephen Holmes, *In Case of Emergency: Misunderstanding Tradeoffs in the War on Terror*, 97 CAL. L. REV. 301, 313 (2009).

2. *Id.* (quoting RICHARD A. POSNER, NOT A SUICIDE PACT: THE CONSTITUTION IN A TIME OF NATIONAL EMERGENCY 148, 152 (2006)).

3. *Id.* at 314-16. Holmes specifically stated that:

> [The tradeoff metaphor] implies that, after 9/11, the American government faced a black-and-white choice between preserving the Bill of Rights and preventing the next attack. As a consequence, the prominence of the liberty-security polarity poisons democratic deliberation about how best to confront the terrorist threat. It does so by lending a spurious plausibility to the slanderous charge that expressing concern for personal liberty, in the context of the war on terror, comes close to lending aid and comfort to the enemy.

Id. at 316. While this discussion is not the focus of this Comment, it provides an interesting context in which to view the role of the Fourth Amendment in providing protection, especially during the War on Terror.

4. *See* Michael W. McConnell, *The Story of* Marbury v. Madison*: Making Defeat Look Like Victory, in* CONSTITUTIONAL LAW STORIES 13, 13 (Michael C. Dorf ed., 2004).

5. *Id.*

6. Holmes, *supra* note 1, at 313.

7. *Nigerian in Custody After Alleged Airline Terror Act Foiled*, CNN (Dec. 26, 2009), http://www.cnn.com/2009/CRIME/12/26/airliner.firecrackers/index.html?iref=allsearch.

explosion."[8] Since the failed bombing attempt, the pressure to heighten security at the expense of civil liberties is taking center stage in the public discourse.[9] Despite the advanced capabilities of full-body scanners, these devices would "not have caught substances hidden in a bodily orifice or substances concealed by folds of skin on an obese suspect."[10] The controversy regarding privacy and full-body scanners is a full-fledged debate taking place in the public domain.[11] More advanced technology is currently present, but the public debate appears to be silent on the subject.[12] Is greater technology necessary? Is greater technology inevitable? Are more invasive searches permitted? At what point does society draw the line between invasion of individual rights and national security? Would passengers on the Christmas Northwest Airlines flight have consented to sniffing technology that detects chemical, biological, and nuclear agents on and within their bodies if it meant that the alleged terrorist was never permitted to board the flight?

In *War and Liberty*, Geoffrey Stone wrote:

> War excites great fear, patriotism, and anxiety. Thousands, perhaps millions, of lives may be at risk. The nation itself may be in peril. If ever there is a time to pull out all the stops, it is surely in wartime. In war, the government may conscript soldiers, commandeer property, control prices, ration food, raise taxes, and freeze wages. May it also limit our liberties?[13]

This Comment will discuss the denial of civil liberties during the War on Terror, specifically the encroachment of the Fourth Amendment. The Albuquerque International Airport, Sunport (Sunport), began a pilot program in which it installed ThreatSense technology to detect biological, chemical, and nuclear threats.[14] This technology sniffs the air around travelers in the airport, most likely without their knowledge.[15]

Part II of this Comment will review the history and tension between civil liberties and wartime, as well as the pattern of contracting civil

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8. *Detroit Airliner Incident "Was Failed Bomb Attack,"* BBC NEWS (Dec. 26, 2009), http://news.bbc.co.uk/2/hi/8430612.stm.

9. *See* Jason Chaffetz, *Don't Let Security Scanners Erase Our Privacy*, CNN (Dec. 31, 2009), http://www.cnn.com/2009/OPINION/12/31/chaffetz.whole.body.images.privacy.security/.

10. Marnie Hunter, *Body Scanners Not "Magic Technology" Against Terror*, CNN (Dec. 31, 2009), http://www.cnn.com/2009/TRAVEL/12/30/airport.security.screening/index.html.

11. *See, e.g., Q&A: Controversial Full Body Scanners*, CNN (Dec. 30, 2009), http://www.cnn.com/2009/TRAVEL/12/30/airline.terror.scanners/.

12. *See infra* Part V.

13. GEOFFREY R. STONE, WAR AND LIBERTY: AN AMERICAN DILEMMA: 1790 TO THE PRESENT xiii (2007).

14. Access Intelligence, LLC, *Terror Response Technology Report*, May 27, 2009, *available at* 2009 WLNR 10052961.

15. Kayla Anderson, *New Level of Travel Protection Tested at Sunport*, KOB.COM, http://www.kob.com/article/stories/S1134699.shtml?cat=0 (last visited Sept. 9, 2010).

liberties and later discovering that those actions were unnecessary.[16] Parts III and IV of this Comment will provide an overview of the case law that has developed the Fourth Amendment jurisprudence, including the case law surrounding searches at airports specifically.[17] In Part V, this Comment will discuss the technology used in the Sunport pilot program, describe how the technology works, and what the system, as a whole, looks like.[18] Finally, in Part VI, this Comment will apply Fourth Amendment case law to determine if use of the technology at the airport is a violation of passengers' Fourth Amendment rights.[19] Parts VII and VIII will conclude with policy implications of this technology and potential uses of this technology that would comply with the Fourth Amendment.[20]

II. HISTORICAL CURTAILMENT OF CIVIL LIBERTIES IN THE NAME OF NATIONAL SECURITY

It is not uncommon for the United States to take steps to shrink civil liberties in a time of crisis, and then to realize later that the actions were unjustified.[21] History shows that stripping individuals of their liberties is a common theme during periods of wartime and when the United States feels threatened.[22] President Lincoln suspended the writ of habeas corpus during the Civil War and sought the approval of Congress only after his decision was already made.[23] While the Supreme Court did not rule on President Lincoln's actions, it denied jurisdiction to review the constitutionality of military tribunals during the course of the war.[24] After the war concluded, the Court changed its view, determining that subjecting civilians to military tribunals was unconstitutional.[25] In the 1920s, when the United States assisted anti-Soviet forces in Russia, the "Supreme Court upheld the use of

16. *See infra* Part II.

17. *See infra* Parts III and IV.

18. *See infra* Part V.

19. *See infra* Part VI.

20. *See infra* Parts VII and VIII.

21. *See* Mark Tushnet, *Defending* Korematsu*? Reflections on Civil Liberties in Wartime, in* THE CONSTITUTION IN WARTIME 124, 125 (Mark Tushnet ed., 2005) ("The pattern is this: The government takes some action that its officials—and frequently the courts—justify by invoking national security. In retrospect, once the wartime emergency has passed, the actions, and their endorsement by the courts, come to be seen as unjustified in fact (that is, by the facts as they existed when the actions were taken). The explanation is this: The actions are taken under conditions of uncertainty, when the officials do not know how the war is going to turn out, but they are evaluated retrospectively in, as Holmes put it, in calmer times, and often the war has been won.").

22. *Id.* at 125-36.

23. *Id.* at 125-26.

24. *See Ex parte* Vallandigham, 68 U.S. 243, 253 (1864); *see* Tushnet, *supra* note 21, at 126.

25. *Ex parte* Milligan, 71 U.S. 2, 86 (1866); Tushnet, *supra* note 21, at 126.

laws making unlawful the criticism of government policy."[26] Later, the Court repudiated these loose First Amendment standards.[27]

Perhaps the most egregious example of the United States government restraining civil liberties occurred during World War II, when fears that citizens of Japanese ancestry would commit acts of disloyalty led the United States to sanction the detention of Japanese-Americans in internment camps.[28] The Supreme Court upheld the actions in *Korematsu v. United States*.[29] This was a complete denial of civil liberties of citizens of Japanese ancestry.[30] The Court made its decision before the end of the war, justifying its decision by stating that "[p]ressing public necessity may sometimes justify the existence of such restrictions . . . ."[31] In reference to the liberty of American citizens at stake, the Court stated:

> [H]ardships are part of war, and war is an aggregation of hardships. All citizens alike, both in and out of uniform, feel the impact of war in greater or lesser measure. Citizenship has its responsibilities as well as its privileges, and in time of war the burden is always heavier.[32]

The Supreme Court refused to say that the actions taken against those of Japanese ancestry were unjustified.[33] In hindsight, some scholars have characterized *Korematsu* as the "worst blow our [civil] liberties have sustained in many years."[34]

During the Cold War, limitations on speech were once again prevalent, with the Supreme Court upholding convictions of communist party leaders.[35] Later in the 1950s, the Court interpreted the Smith Act narrowly to reverse some Communist Party convictions.[36]

In the Vietnam War, President Nixon engaged in electronic surveillance of American citizens that did not comply with the Fourth Amendment.[37] The Supreme Court did not agree with the Nixon

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26. Tushnet, *supra* note 21, at 126.

27. *See, e.g.*, Brandenburg v. Ohio, 395 U.S. 444, 449 (1969); *see* Tushnet, *supra* note 21, at 126.

28. *See* Korematsu v. United States, 323 U.S. 214, 223 (1944).

29. *Id.*

30. *See id.*

31. *Id.* at 216.

32. *Id.* at 219.

33. *Id.* at 224 ("We cannot—by availing ourselves of the calm perspective of hindsight—now say that at that time these actions were unjustified.").

34. Tushnet, *supra* note 21, at 124 (quoting Eugene Rostow, *The Japanese-American Cases: A Disaster*, 54 YALE L.J. 489 (1945)). Mark Tushnet notes that Eugene Rostow's view of *Korematsu* is the prevailing view of modern times. *Id.* at 125.

35. Dennis v. United States, 341 U.S. 494, 516-17 (1951); *see* Tushnet, *supra* note 21, at 127.

36. *See* Yates v. United States, 354 U.S. 298, 306-12 (interpreting "organize" narrowly in order to reverse convictions of Communist party leaders); Tushnet, *supra* note 21, at 127.

37. Geoffrey R. Stone, *The Vietnam War: Spying on Americans*, *in* SECURITY V. LIBERTY: CONFLICTS BETWEEN CIVIL LIBERTIES AND NATIONAL SECURITY IN AMERICAN HISTORY 95, 106-07 (Daniel Farber, ed. 2008).

administration's actions as discussed in *United States v. United States District Court for the Eastern District of Michigan.*[38]

The Court has continuously contracted civil liberties in the name of national security—subsequently concluding that the decision was incorrect or too limiting.[39] It is truly a cycle of the American court system.[40] Unfortunately, this country finds itself again in the midst of this cycle of contracting civil liberties during a time of war.[41] This country is confronting many challenges to civil liberties including the PATRIOT Act, the Foreign Intelligence Surveillance Act, and detainee rights during a War on Terror.[42] Airport security has also changed drastically in the years since September 2001.[43] One of the recent possible civil liberty intrusions includes new sniffing technology implemented in a pilot project at Sunport.[44]

III. FOURTH AMENDMENT OVERVIEW

The Fourth Amendment protects against unreasonable searches and seizures.[45] 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.[46]

The Fourth Amendment contains two parts—the Reasonableness Clause and the Warrant Clause.[47] The first portion of the Amendment, the

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38. United States v. U.S. Dist. Court (*Keith*), 407 U.S. 297, 321 (1972) ("Thus, we conclude that the Government's concerns do not justify departure in this case from the customary Fourth Amendment requirement of judicial approval prior to initiation of a search or surveillance."); Stone, *supra* note 37, at 107 ("[E]ven in national security investigations the president has no lawful authority to conduct electronic surveillance of American citizens on American soil without a judicially issued search warrant based on a finding of probable cause.").

39. *See* Tushnet, *supra* note 21, at 125-36.

40. *See id.* at 125.

41. *See* Daniel Farber, *Introduction, in* SECURITY V. LIBERTY: CONFLICTS BETWEEN CIVIL LIBERTIES AND NATIONAL SECURITY IN AMERICAN HISTORY 1, 1-10 (Daniel Farber, ed. 2008).

42. *See id.*

43. *See generally* Sara Kornblatt, *Are Emerging Technologies in Airport Passenger Screening Reasonable Under the Fourth Amendment?*, 41 LOY. L.A. L. REV. 385, 385-90 (2007) (describing the evolution of passenger screening technology at airports).

44. Anderson, *supra* note 15; Michael Hartranft, *Sunport Used for Testing New Detection System that "Sniffs" Ventilation Air for Potential Bio-threats*, AIRPORT BUSINESS (Sept. 1, 2009), http://www.airportbusiness.com/web/online/Top-News-Headlines/Sunport-used-for-testing-new-detection-system-that-sniffs-ventilation-air-for-potential-bio-threats/1$30642.

45. U.S. CONST. amend. IV.

46. *Id.*

47. JOSHUA DRESSLER, UNDERSTANDING CRIMINAL PROCEDURE 77 (3d ed. 2002).

Reasonableness Clause, protects people from unreasonable searches and seizures.[48] The second portion of the Amendment, the Warrant Clause, provides that probable cause is required for the government to issue a warrant.[49] This Comment deals solely with the Reasonableness Clause, and the reasonableness of the search involved, because airport searches do not require a warrant.[50] Although the framers included the Fourth Amendment in the Bill of Rights as a result of the abuse of general warrants in England, the Supreme Court has indicated that the "evil the Amendment was designed to prevent was broader than the[se] abuse[s]."[51] The Court has stated that "physical entry of the home [without a valid warrant] is the chief evil against which the . . . Fourth Amendment is directed."[52] Protection of the home is a core Fourth Amendment value.[53] Under *United States v. Katz*, however, the Court stated that the Fourth Amendment is all about protecting expectations of privacy.[54] While the Fourth Amendment raises concerns as to the security of a person, the concern does not end there; instead, the concern stems to what evidence may or may not be admissible against a defendant when the evidence in question was a result of a search and seizure.[55]

A. What Constitutes a Search?

Defining what constitutes a search under the Fourth Amendment is important because if there is a search, the government must comply with the Fourth Amendment.[56] The word "search" in the Fourth Amendment context is a term of art.[57] In *Boyd v. United States*, the Supreme Court held that the government conducts a search only when there is a physical intrusion into a "constitutionally protected area."[58] Essentially, under *Boyd*, there must be a physical trespass into a constitutionally protected area in order to trigger Fourth Amendment protections.[59] The Court, citing Lord Camden, looked to the sanctity with which society views private property

48. *Id.*

49. *Id.* A major debate in Fourth Amendment jurisprudence is whether these clauses are independent clauses or dependent clauses. *Id.*

50. *See infra* Part IV.

51. DRESSLER, *supra* note 47, at 78 (quoting Payton v. New York, 445 U.S. 573, 585 (1980)). A general warrant was one that allowed "agents of the Crown, on very little basis, to forcibly enter and search (indeed, ransack) homes for books and papers for use in seditious libel prosecutions." *Id.*

52. *Id.* at 79 (quoting United States v. U.S. Dist. Court (*Keith*), 407 U.S. 297, 313 (1972)).

53. *See id.*

54. *See* Katz v. United States, 389 U.S. 347, 353 (1967).

55. *See* Terry v. Ohio, 392 U.S. 1, 12 (1986).

56. *See* DRESSLER, *supra* note 47, at 93.

57. *Id.*

58. *Id.* at 94-95 (quoting Lanza v. New York, 370 U.S. 139, 142 (1962)).

59. *Id.*

and the laws of trespass to analyze a Fourth Amendment search.[60] In *Olmstead v. United States*, the Court affirmed its position that the government violates the Fourth Amendment only upon a trespass of tangible personal property.[61] *Olmstead* involved a situation in which the government wire-tapped phone lines in order to gather evidence of a conspiracy involving unlawful activity.[62] The Court noted that no trespass occurred as a means to tap the phone lines.[63] Therefore, the Court held that the Fourth Amendment could not be violated because there had been no "official search and seizure of his person or such a seizure of his papers or his tangible material effects or an actual physical invasion of his house 'or curtilage' for the purpose of making a seizure."[64] The Court's position remained strong and unwavering until *Silverman v. United States*.[65]

The focus on physical trespass began to shift in the Supreme Court's decision in *Silverman*.[66] In *Silverman*, the Court began to back away from the requirement that a violation of the Fourth Amendment must include a trespass.[67] In *Silverman,* the police suspected that the defendant was participating in a gambling operation in a building.[68] With permission from the building's owner, the police used the building next door to run surveillance on the suspect, installing a "spike mike" to listen to the communications in the suspect's building.[69] The police placed a microphone under a baseboard of the house to act as a "sounding board."[70] The microphone "made contact with a heating duct serving the house occupied by the [defendants], thus converting their entire heating system into a conductor of sound."[71] The Court's decision remained mostly true to precedent, indicating the placement of the spike mike was an "unauthorized physical penetration into the premises occupied by the [defendants]" when the microphone made contact with the defendants' heating duct.[72] The Court, however, did not require there to be a common law trespass in order for the police's actions to fall within the purview of the Fourth

60. Boyd v. United States, 116 U.S. 616, 627-28 (1886).

61. Olmstead v. United States, 277 U.S. 438, 466 (1928).

62. *Id.* at 456-57.

63. *Id.* at 457.

64. *Id.* at 466.

65. *See* DRESSLER, *supra* note 47, at 95.

66. Silverman v. United States, 365 U.S. 505, 511 (1961); *see also* DRESSLER, *supra* note 47, at 95 (noting that *Silverman* marked the beginning of the erosion of the physical trespass notion in Fourth Amendment law).

67. *Silverman*, 365 U.S. at 510-11 ("In these circumstances we need not pause to consider whether or not there was a technical trespass under the local property law relating to party walls. Inherent Fourth Amendment rights are not inevitably measurable in terms of ancient niceties of tort or real property law.").

68. *Id.* at 506.

69. *Id.*

70. *Id.*

71. *Id.* at 506-07.

72. *Id.* at 509.

Amendment.[73] With *Silverman*, the erosion of the trespass requirement began and modern Fourth Amendment jurisprudence emerged.[74]

The trespass requirement of Fourth Amendment jurisprudence finally came to an end in the Supreme Court's decision in *Katz v. United States*.[75] The *Katz* Court expressly overruled *Olmstead* and its progeny.[76] In *Katz*, the government presented evidence that it had obtained by placing a recording device on the outside of a telephone booth that the defendant used to place his calls.[77] The Court noted that the protections of the Fourth Amendment do not disappear simply because a person is in public.[78] Thus, if a person seeks to preserve something as private, even if he or she is in a public area, the Fourth Amendment may still provide protection.[79] The defendant was in public, but he did not intend for his conversations in the telephone booth to be exposed to the public; thus, there was a reasonable expectation of privacy within the phone booth even though it is a public place.[80] The Court concluded that the Fourth Amendment's scope is not limited to physical penetration of tangible personal property.[81] Although the majority eliminated the trespass and constitutionally protected area requirements, it failed to provide a clear test for deciding future Fourth Amendment cases.[82] The majority did note, however, that the defendant had "justifiably relied" on the privacy of the telephone booth.[83] Justice Harlan's concurrence articulated the framework for determining whether a Fourth Amendment violation occurred.[84] His test stated that the Fourth Amendment has a "twofold requirement, 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.'"[85] Although highly criticized in the years that followed, Justice Harlan's test is

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73. *Id.* at 510.

74. *See id.* at 511; *see* DRESSLER, *supra* note 47, at 95.

75. *See* Katz v. United States, 389 U.S. 347, 353 (1967); *see* DRESSLER, *supra* note 47, at 96.

76. *Katz*, 389 U.S. at 353 ("We conclude that the underpinnings of *Olmstead* . . . have been so eroded by our subsequent decisions that the 'trespass' doctrine there enunciated can no longer be regarded as controlling.").

77. *Id.* at 348.

78. *Id.* at 351.

79. *Id.* at 351.

80. *See id.* at 352.

81. *Id.* at 352-53. The Court emphasized, prior to announcing its holding, that the Fourth Amendment protects individual privacy from unreasonable intrusion by the government. *Id.* at 350. The Court's recognition that the Fourth Amendment protects the right to one's privacy, secured from governmental intrusion, seems to be a key turning point in Fourth Amendment jurisprudence because analyzing the issue from the individual liberty perspective required the Court to drop the technical trespass requirement. *See id.* at 353.

82. *See id.* at 348-49; *see* DRESSLER, *supra* note 47, at 97.

83. *Katz*, 389 U.S. at 353.

84. *Id.* at 361 (Harlan, J., concurring).

85. *Id.*; *see also* DRESSLER, *supra* note 47, at 98 (discussing the parameters of Justice Harlan's test).

still the predominant test used by the Court today when assessing Fourth Amendment issues.[86]

The Supreme Court employed Justice Harlan's approach in *Kyllo v. United States*.[87] The *Kyllo* decision provides the best framework for analyzing Fourth Amendment issues relating to technological advances.[88] *Kyllo* involved the use of a thermal imaging device.[89] A government agent sat across the street from the defendant in his car and used the thermal imaging device to detect heat emanating from the defendant's home to determine if the defendant was growing marijuana.[90] The Court recognized that things visual to the naked eye have always been held to be admissible as evidence against a defendant.[91] In other words, the Court noted, law enforcement does not have to "shield their eyes" to activity carried out in public.[92] As it began its analysis, the Court distinguished *Kyllo* from the everyday naked-eye surveillance case—*Kyllo* involved more than naked eye surveillance.[93] The Court held that "obtaining by sense-enhancing technology any information regarding the interior of the home that could not otherwise have been obtained without physical 'intrusion into a constitutionally protected area' constitutes a search—at least where (as here) the technology in question is not in general public use."[94] Therefore, the Court held that the information obtained by the thermal imaging device was in fact the product of a search.[95] The majority opinion, written by Justice Scalia went so far as to say that the thermal imaging surveillance conducted by the government was "presumptively unreasonable without a

86. *See* Kyllo v. United States, 533 U.S. 27, 33 (2001) ("[A] Fourth Amendment search occurs when the government violates a subjective expectation of privacy that society recognizes as reasonable."); DRESSLER, *supra* note 47, at 98-107. Prior to *Kyllo*, the Supreme Court began using Justice Harlan's test, but the *Kyllo* case is most analogous to the technology at issue in this Comment. *See, e.g.*, California v. Greenwood, 486 U.S. 35, 39 (1988) ("The warrantless search and seizure of the garbage bags left at the curb outside the Greenwood house would violate the Fourth Amendment only if respondents manifested a subjective expectation of privacy in their garbage that society accepts as objectively reasonable."); Smith v. Maryland, 442 U.S. 735, 740 (1979) ("[T]his Court uniformly has held that the application of the Fourth Amendment depends on whether the person invoking its protection can claim a 'justifiable,' a 'reasonable,' or a 'legitimate expectation of privacy' that has been invaded by government action.").

87. *Kyllo*, 533 U.S. at 33.

88. *See id.* at 34 ("The question we confront today is what limits there are upon this power of technology to shrink the realm of guaranteed privacy."); *see* DRESSLER, *supra* note 47, at 120.

89. *Kyllo*, 533 U.S. at 29.

90. *Id.* at 29-30. Halide lights are used to grow marijuana in homes. *See id.* at 30. Thermal imaging devices can detect the heat from these lights and determine that a home was relatively hot compared to neighboring homes, leading the government to deduce that a person is using halide lights to grow marijuana. *Id.* Such was the case in *Kyllo*. *See id.* at 29-30.

91. *Id.* at 31-32 ("Visual surveillance was unquestionably lawful because 'the eye cannot by the laws of England be guilty of a trespass.'") (quoting Boyd v. United States, 116 U.S. 616, 628 (1886)).

92. *Id.* at 32.

93. *Id.* at 33.

94. *Id.* at 34 (quoting Silverman v. United States, 365 U.S. 505, 512 (1961)) (internal citations omitted).

95. *Id.* at 35.

warrant."[96] While the *Kyllo* case provides a good framework for Fourth Amendment limitations on technological advancements, it remains unclear how far technology will be able to go while remaining within the confines of the Fourth Amendment.

B. The Fourth Amendment Protects Persons, Houses, Papers and Effects

The Fourth Amendment provides that a person is "to be secure in their persons, houses, papers, and effects."[97] By negative implication, this means that those things that are not persons, houses, papers, and effects are not protected from unreasonable search and seizure.[98] While this portion of the text of the Amendment has not been heavily litigated, it is important for the purposes of this discussion to understand what the framers meant when they included the term "persons."[99] The security of the person is primarily concerned with the following areas of bodily integrity:

> (1) [Defendant]'s body as a whole, such as when he is arrested; (2) the exterior of [Defendant]'s body (including his clothing), as when he is patted down for weapons or the contents of his clothing are searched; and (3) the interior of [Defendant]'s body, such as when blood is extracted to test for alcohol content.[100]

C. What Constitutes a Search of a Person?

1. The Exterior of Defendant's Body

The Fourth Amendment provides protection against unreasonable searches of a person.[101] In *Chimel v. California*, police officers went to Chimel's home to arrest him for the burglary of a coin shop.[102] His wife allowed the police officers to enter the home.[103] After arriving a few minutes later, police officers arrested him and then conducted a search of his home, even though a judge had not issued a search warrant to the police officers.[104] The Court decided that a person may be searched when it is incident to arrest, but the search must be limited to "the area from within which he might have obtained either a weapon or something that could have

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96. *Id.* at 40.
97. U.S. CONST. amend. IV.
98. DRESSLER, *supra* note 47, at 89.
99. *See id.*
100. *Id.* at 90 (internal citations omitted); *see* Chimel v. California, 395 U.S. 752, 755 (1969); Terry v. Ohio, 392 U.S. 1, 24-25 (1968); Schmerber v. California, 384 U.S. 757, 767 (1966).
101. U.S. CONST. amend. IV.
102. *Chimel*, 395 U.S. at 753.
103. *Id.*
104. *Id.* at 753-54.

been used as evidence against him."[105] The search of a person is reasonable when incident to arrest, but extending the search beyond the area of the person or beyond the area in which a person might obtain a weapon is unreasonable in scope under the Fourth Amendment.[106] This is a very limited exception that requires an arrest first.[107]

In *Terry v. Ohio*, the Supreme Court recognized that the Fourth Amendment is about protecting people, as opposed to protecting places, which includes "wherever an individual may harbor a reasonable 'expectation of privacy.'"[108] The Court stated in *Terry* that "it is nothing less than sheer torture of the English language to suggest that a careful exploration of the outer surfaces of a person's clothing all over his or her body in an attempt to find weapons is not a 'search.'"[109] This protection provided for in *Terry* seemed to stem from the care for the sanctity of the person and the humiliation and indignity that results from a search occurring in the eyes of the public.[110] The Court was very cautious when dealing with searches invading even the exterior of the defendant's body.[111] Without an applicable exception, under *Chimel* and *Terry*, the search of a person's exterior is a search within the meaning of the Fourth Amendment.[112]

2. *The Interior of Defendant's Body*

In moving away from the traditional trespass concept of a Fourth Amendment search, the Court has stated that "[t]he overriding function of the Fourth Amendment is to protect personal privacy and dignity against unwarranted intrusion by the State."[113] The Court held in *Schmerber v. California* that "compulsory administration of a blood test" is a search of a person within the purview of the Fourth Amendment.[114] The Court also

105. *Id.* at 768. The Court went on to state that "[t]here was no constitutional justification, in the absence of a search warrant, for extending the search beyond that area." *Id.*

106. *Id.*

107. *See id.* at 766.

108. Terry v. Ohio, 392 U.S. 1, 9 (1986) (quoting Katz v. United States, 389 U.S. 347, 361 (1967)).

109. *Id.* at 16. The Court ultimately held that the police officer's search of Terry was constitutional because it was a reasonable search for weapons, which was intended to protect the officer's safety. *Id.* at 27. But, the Court's initial premise was that a search of the clothing is a search within the grasp of the Fourth Amendment. *Id.* at 16.

110. *Id.* at 24-25 ("Even a limited search of the outer clothing for weapons constitutes a severe, though brief intrusion upon cherished personal security, and it must surely be an annoying, frightening, and perhaps humiliating experience.").

111. *See id.* at 9-15. The trepidation with which the Court approaches Fourth Amendment issues is a result of the Court's belief that "[n]o right is held more sacred." *Id.* at 9 (quoting Union Pac. R. Co. v. Botsford, 141 U.S. 250, 251 (1891)).

112. *See id.* at 16.

113. Schmerber v. California, 384 U.S. 757, 767 (1966).

114. *Id.* The Court ultimately held that, under the circumstances in which the government administered the blood test in *Schmerber*, the blood test was admissible and was appropriate incident to

noted that Fourth Amendment jurisprudence primarily relied upon invasion into private property of individuals as opposed to invasion into a person's body; therefore, the Court stated that the Fourth Amendment property cases were not instructive for deciding invasion into a person's body.[115]

D. Fourth Amendment Searches and Technology

Technology is rapidly changing. As one author notes, "[o]ur communications are multi-modal; we communicate synchronously or asynchronously by voice, text or data, and combine modes."[116] The Court's precedent, namely *Katz v. United States*, involved already outdated technology, so precedent provides little guidance in dealing with technology issues as they relate to the Fourth Amendment when recent technology is so far advanced.[117] For example, in 2003, the Ninth Circuit ruled on a case involving the Federal Bureau of Investigation and its attempt to wiretap a person's vehicle.[118] Technology is so advanced that the GPS and cell phone capabilities within cars make it feasible to listen to conversations within the confines of a person's car.[119] "Aware homes" are another way in which technology continues to advance.[120] The aware homes are "equipped with technology that can be used to eavesdrop on our conversations and track our activities."[121] The *Katz* precedent established the test that there is a subjective expectation of privacy, and that this privacy interest should be reasonable.[122] But, this formulation breaks down when there is no longer spatial privacy.[123] As technology continues to advance, application of the *Katz* test and the *Kyllo* test means that the area in which a person has a reasonable expectation of privacy decreases until there is no place to go to seek a reasonable expectation of privacy.[124]

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arrest. *Id.* at 771. Nonetheless, the Court's framework began with the analysis that the invasion into a person's body was most certainly a search under the Fourth Amendment. *Id.* at 767.

115. *Id.* at 767-68. Interestingly, as an alternative, the Court laid out a "shocks the conscience" standard for dealing with bodily integrity issues and decided not to invoke the Fourth Amendment in a forced stomach-pumping case. *See* Rochin v. California, 342 U.S. 165, 172 (1952).

116. Susan W. Brenner, *The Fourth Amendment in an Era of Ubiquitous Technology*, 75 MISS. L.J. 1, 43 (2005).

117. *See id.*

118. *Id.* at 44 (citing *In re* U.S. for an Order Authorizing Roving Interception of Oral Communications, 349 F.3d 1132, 1134 (9th Cir. 2003)). The Ninth Circuit held that the surveillance in question "could not be carried out 'with a minimum of interference with the services'" under Title III of the Omnibus Crime Control and Safe Streets Act of 1968. *Id.* at 45-46 (quoting *In re U.S.*, 349 F.3d at 1144-46).

119. *Id.* at 44 (quoting *In re U.S.*, 349 F.3d at 1133).

120. *See id.* at 49.

121. *See id.* at 47.

122. Katz v. United States, 389 U.S. 347, 361 (1967) (Harlan, J., concurring).

123. *See id.*

124. *See id.*; Brenner, *supra* note 116, at 50.

IV. AIRPORT SEARCHES

Generally, the government cannot search a person without a warrant and probable cause; however, there are many exceptions to this general rule.[125] "In the context of airport searches, however, probable cause, or even a minimal level of individualized suspicion, does not set the constitutional floor for protection."[126] Essentially, the probable cause standard on which Fourth Amendment jurisprudence is based is thrown out upon entrance into one of our nation's airports.[127] The justification for the lower reasonableness threshold for a search in an airport is that the searches are implemented as part of a general regulatory scheme.[128] The government does not randomly select individuals for the search, but rather, searches each person equally as they proceed through security to board their aircraft.[129]

A. Administrative Searches in Airports

The Ninth Circuit has interpreted Supreme Court precedent to permit administrative searches in airports.[130] While the Court has not dealt specifically with searches in airports, other administrative searches have been upheld, indicating that airport administrative searches without a warrant would also comply with the Fourth Amendment.[131] In *Illinois v. Lafayette*, the issue was whether, "consistent with the Fourth Amendment, it is reasonable for police to search the personal effects of a person under lawful arrest as part of the routine administrative procedure at a police station house incident to booking and jailing the suspect."[132] The Court answered in the affirmative, holding that probable cause is not required for routine, inventory searches, and the "absence of a warrant is immaterial to

125. Tobias W. Mock, *The TSA's New X-Ray Vision: The Fourth Amendment Implications of "Body-Scan" Searches at Domestic Airport Security Checkpoints*, 49 SANTA CLARA L. REV. 213, 231 (2009).

126. *Id.* (citing United States v. Aukai, 497 F.3d 955, 962 (9th Cir. 2007)).

127. *See id.*

128. *See id.* (citing People v. Dukes, 580 N.Y.S.2d 850, 851-52 (N.Y. 1992)). An administrative search can be defined as one that is "aimed at a group or class of people rather than a particular person." *Id.* (quoting *Dukes*, 580 N.Y.S.2d at 851-52).

129. *See id.* (citing *Dukes*, 580 N.Y.S.2d at 851-52).

130. *See Aukai*, 497 F.3d at 959 (citing New York v. Burger, 482 U.S. 691 (1987)). The Ninth Circuit then states in a footnote that the Supreme Court has never actually upheld airport screening searches as constitutionally reasonable, but states that "[o]n three occasions, however, the Supreme Court has *suggested* that airport screening searches are constitutionally reasonable administrative searches." *Id.* at 959 n.2. (emphasis in original) (referring to the Supreme Court's decisions in City of Indianapolis v. Edmond, 531 U.S. 32, 47-48 (2000); Chandler v. Miller, 520 U.S. 305, 323 (1997); and Nat'l Treasury Employees Union v. VonRaab, 489 U.S. 656, 675 n.3 (1989)).

131. *See, e.g.*, Illinois v. Lafayette, 462 U.S. 640, 643-644 (1983).

132. *Id.* at 643.

the reasonableness of the search."[133] The Court affirmed that the government does not need to have either a warrant or probable cause to conduct an inventory search in *Colorado v. Bertine*.[134]

"Administrative searches are not carried out to gather evidence as part of a criminal investigation."[135] Instead, administrative searches are a part of a general regulatory scheme, meaning that each person attempting to board a plane is subject to the same treatment.[136] Although these searches are not subject to the warrant requirement, they must be reasonable under the Fourth Amendment to be valid.[137] The Ninth Circuit articulated the reasonableness test for airport administrative searches as follows: To be reasonable, a passenger "screening search must be as limited in its intrusiveness as is consistent with satisfaction of the administrative need that justifies it."[138] In assessing reasonableness, several considerations must be made.[139] First, the government must respect a passenger's right to either consent to the search or walk away and not board a plane.[140] A second consideration is the danger involved as the reason for conducting the search in the first instance.[141] The Fifth Circuit has held that "some situations present a level of danger such that the reasonableness test is per se satisfied."[142] Where "the risk is the jeopardy to hundreds of human lives and millions of dollars of property inherent in the pirating or blowing up of a large airplane, the danger *alone* meets the test of reasonableness."[143] Essentially, airport searches are justified on the grounds that they are both administrative searches and generally applicable, and further, are reasonable in light of the risks presented.[144]

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133. *Id.*

134. Colorado v. Bertine, 479 U.S. 367, 371 (1987).

135. Kornblatt, *supra* note 43, at 393.

136. *Id.*

137. *Id.* (citing United States v. Davis, 482 F.2d 893, 910 (9th Cir. 1973)).

138. *Id.* (quoting *Davis*, 482 F.2d at 910).

139. *Id.* at 394-96.

140. *Id.* at 394. Although the option to travel by plane or not travel by plane does not seem like much of a choice, the option presented to travelers nonetheless suffices as consent for the purposes of Fourth Amendment analysis. *Id.*

141. *Id.* at 395.

142. *Id.* (citing United States v. Skipwith, 482 F.2d 1272 (5th Cir. 1973)).

143. *Id.* (citing *Skipwith*, 482 F.2d at 1276). The Third Circuit has also held that the administrative, suspicion-less searches at airports are constitutionally sound because the searches at checkpoints "are permissible under the Fourth Amendment when a court finds a favorable balance between 'the gravity of the public concerns served by the seizure, the degree to which the seizure advances the public interest, and the severity of the interference with individual liberty.'" *Id.* at 400 (quoting United States v. Hartwell, 436 F.3d 174, 178-79 (3d Cir. 2006)).

144. *Id.* at 392-401.

B. Special Needs Searches in Airports

The "special needs doctrine" provides additional support for searches in airports.[145] The general rule is that warrantless, suspicion-less searches are unreasonable; however, the special needs doctrine provides an exception to the general rule.[146] Under this doctrine, the purpose of the search cannot be to gather evidence of a crime.[147] The Second Circuit upheld searches at security checkpoints in the New York City subway stations under the special needs doctrine.[148] The factors that a court should consider in determining the applicability of the special needs doctrine include the following: "whether the government interest for the search program is immediate and substantial, whether the person being searched has an actual and reasonable expectation of privacy surrounding the item being searched, whether the search is minimally intrusive, and whether the search program effectively advances the government interest."[149] These factors are similar, although more detailed, to the factors included in the determination of whether a search is reasonable as an administrative search.[150] Therefore, for the purposes of this Comment, the sniffing technology in question will be analyzed under an administrative search framework instead of the alternative argument.[151]

V. CURRENT TECHNOLOGY USED IN THE DEPARTMENT OF HOMELAND SECURITY PILOT PROGRAM AT ALBUQUERQUE INTERNATIONAL AIRPORT

About a year ago, Sunport began a pilot program in partnership with the Department of Homeland Security.[152] The project is funded by both the city of Albuquerque and ICx Technologies.[153] Sunport is equipped with technology created by ICx Technologies, which provides a "comprehensive chemical, biological, radiation and nuclear (CBRN) system that also includes a vulnerability assessment, solution design, installation, network monitoring and alert responses for critical infrastructure protection."[154] The system is analogous to a smoke alarm, but much more technologically advanced—instead of checking for fires, the system has been created to

145. *See id.* at 401.

146. *Id.*

147. *Id.*

148. *Id.* at 401-02.

149. *Id.* at 402 (citing *Fourth Amendment 'Special Needs' Doctrine Justifies Suspicionless Subway Checkpoints*, 75 U.S. L. WK. 1115, 1115-16 (2006)).

150. *See supra* notes 139-41 and accompanying text.

151. Kornblatt, *supra* note 43 at 394-95; *see infra* Part VI.B.

152. *See* Hartranft, *supra* note 44. The main concern for the project has been detecting anthrax. *Id.* But, the technology can detect various chemical, biological, and nuclear agents. *See infra* note 155 and accompanying text..

153. Hartranft, *supra* note 44.

154. Access Intelligence, LLC, *supra* note 14.

check for various chemical, biological, radiation, and nuclear threats.[155] The purpose is not necessarily to identify the agent, but instead, to collect a sample to be tested in a lab for determination of a possible threat.[156]

Interestingly, an everyday passenger would not even know he or she was in the presence of this complex technology, which essentially amounts to sniffing machines.[157] Of course, it is not exactly the kind of technology that Sunport or the Department of Homeland Security would like for travelers to see.[158] The average passenger does not even know this technology surrounds them; however, the technology monitors the air twenty-four hours a day "and feed[s] real-time data to the airport's facility command center."[159]

A. ThreatSense Technology

ICx Technologies provides "ThreatSense" technology for Sunport.[160] ICx Technologies provides technology to secure a building and provides ideas on multi-layer security.[161] Because the exact technology used at Sunport is not provided for security reasons, this Comment will provide an overview of the technology indicated as being standard in building security based on the security diagram provided by ICx Technologies.[162] ICx Technologies has a website that shows how some of the technology works, but does not indicate exactly what data is collected from the sniffing machines (i.e., whether it has a way to identify the person from whom the data was collected).[163] In perimeter control technology, the detection devices are synched with cameras that automatically hone in on the spot in question.[164] While there is not information presently available about the data collection process in regard to sniffing the air and attaching the scent to a particular individual, this Comment will proceed on the assumption that the airport has the capability to, at a minimum, turn a security camera on the

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155. Anderson, *supra* note 15.

156. Hartranft, *supra* note 44. ICx Technology's website, however, indicates that some of the technology does have the ability to both detect and identify the agent. *See, e.g.*, *Chemical Threat Detection: ChemSense 600*, ICX TECHNOLOGIES, http://www.icxt.com/products/icx-detection/chemical/chemsense-600/ (last visited Sept. 23, 2010).

157. Anderson, *supra* note 15.

158. *See id.* In the reporter's interview with the Sunport facilities manager, Joseph Rodriguez, he stated, "To the average public, you stand underneath it and you don't even know what it is and that's the way it's supposed to be." *Id.*

159. Hartranft, *supra* note 44.

160. *Id.*

161. *ThreatSense: A Layered Approach*, ICX TECHNOLOGIES, http://www.icxt.com/uploads/file/products/flyers/BD_THREATSENSE_021910_PAGES.pdf [hereinafter *ThreatSense: A Layered Approach*].

162. *See id.*

163. *See id.*

164. *See, e.g.*, *Airport Perimeter Security*, ICX TECHNOLOGIES, http://www.icxt.com/uploads/file/vertical-markets/airports3%20REVISED.pdf.

spot in question at the airport when sniffing technology suggests that something is awry and some data about the individual is collected and stored. The various technologies are joined by the common operating picture, which provides a way to bring all the information back to one command and control center.[165]

There are several different technologies employed for security purposes. ChemSense 600 is used for chemical threat detection.[166] The product works around the clock, twenty-four hours a day, seven days a week.[167] "Equipped with an onboard computer, the ChemSense 600 controls, stores data and handles communication."[168] Another technology, BioXC is a system to help the user of ThreatSense technology transfer samples of collected material so that it may be properly sampled.[169] BioXC assists in testing samples without human participation so that human exposure is minimized and contamination is less likely.[170]

The AirSentinel 1000B is used as a biological threat-detector.[171] The system detects the agent and then collects a sample for analysis and confirmation.[172] Agents that are generally released in biological attacks include bacterial spores causing anthrax, bacteria causing a plague, viruses such as smallpox, and toxins such as ricin.[173]

STRIDE is the most inconspicuous technology ICx Technologies has to offer.[174] STRIDE technology searches for nuclear threats.[175] STRIDE Series 200 technology is designed for fixed wired installations.[176] "These units can be mounted on walls, above doorways, behind reception desks, behind passport control counters, [and] above luggage or parcel conveyer

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165. *See ThreatSense: A Layered Approach*, *supra* note 161, at 2.

166. *ChemSense 600: Indoor Facility Monitoring for Chemical Detection and Identification, Product Overview*, ICX TECHNOLOGIES, http://www.icxt.com/uploads/file/products/flyers/AI_CHEMSENSE_021210.pdf [hereinafter *ChemSense 600*].

167. *Id.*

168. *Id.*

169. *BioXC 200GX: Triggered or Continuous Air Sampler, Product Overview*, ICX TECHNOLOGIES, http://www.icxt.com/uploads/file/products/flyers/BD_BIOXC_021210.pdf.

170. *Id.*

171. *AirSentinel 1000B: Ambient Aerosol Detector, Product Overview*, ICX TECHNOLOGIES, http://www.icxt.com/uploads/file/products/flyers/BD_AIRSENTINEL_021210.pdf [hereinafter *Air Sentinel 1000B*].

172. *Id.*

173. *Id.*

174. *STRIDE Series 200: Stationary Radionuclide Identification Systems, Product Overview*, ICX TECHNOLOGIES, http://www.icxt.com/uploads/file/products/flyers/RA_STRIDE200_020110.pdf [herein after Series 200].

175. *Id.*; *STRIDE Series 300: Stationary Radionuclide Identification Systems, Product Overview*, ICX TECHNOLOGIES, http://www.icxt.com/uploads/file/products/flyers/RA_STRIDE300_020110.pdf [hereinafter *Series 300*]; *STRIDE Series 800: Stationary Radionuclide Identification Systems, Product Overview*, ICX TECHNOLOGIES, http://www.icxt.com/uploads/file/products/flyers/RA_STRIDE800_020110.pdf [hereinafter *Series 800*].

176. *Series 200*, *supra* note 174.

belts . . . ."[177] This product is advertised such that it has covert installation, has permanent event record storage, and provides remote alerts to personal computers and PDAs.[178] STRIDE Series 300 was specifically designed for pedestrian security installations—namely, to be installed within the vertical posts (security stanchion) supporting the elastic ribbons used to guide persons through the security line.[179] These "[w]ireless systems [are] completely covert to passengers or pedestrians."[180] "Stride View," the graphic user interface accompanying the system, "has the ability to transmit messages and/or screens to another computer or to a PDA worn by the local security officer."[181] As opposed to fixed structures, ICx Technologies has also created STRIDE Series 800, which is a portable detection unit for nuclear material that can detect and identify "radionuclides carried by a pedestrian walking at a pace of one meter per second."[182] Again, this product has the capability to send the information to PDAs and personal computers in remote locations.[183]

B. Handheld Devices in the Near Future?

Scientists within the Department of Homeland Security have been trying to combine the technologies of the cell phone, global positioning system, phone camera and video, and biological and chemical sensing devices.[184] The hope is to combine the above technologies in a package that people would want to purchase.[185] The product would be able to record agents, faces, and locations of a terrorist attack, even if the owner of the product dies at the scene, and it could be useful for those who want to make sure that the air that they are breathing is clear of pollution.[186] Such a product is not a Fourth Amendment concern if public citizens choose to use the product; however, if governmental authorities choose to use this product once it is available, it may implicate the Fourth Amendment similar to the ICx Technologies in the Albuquerque Airport.[187]

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177. *Id.*
178. *Id.*
179. *Series 300*, *supra* note 175.
180. *Id.*
181. *Id.*
182. *Series 800*, *supra* note 175.
183. *Id.*
184. *The Day of the "i-Sniff" Nears*, HOMELAND SECURITY NEWSWIRE (Sept. 16, 2009), http://homelandsecuritynewswire.com/day-isniff-nears.
185. *Id.*
186. *Id.*
187. *See id.*

VI. WHETHER SNIFFING TECHNOLOGY VIOLATES THE FOURTH AMENDMENT

The technology in question implicates the Reasonableness Clause of the Fourth Amendment because a warrant is not required for administrative searches.[188] The issue is whether there is a search in the first instance, and if so, whether the search is reasonable under the Fourth Amendment.[189]

A. Whether Sniffing Technology Constitutes a Search

The technology provided by ICx Technologies is stationary technology; it remains on the wall and sniffs the air around it.[190] Sniffing technology is analogous to the technology used in both *Katz* and *Kyllo*.[191] The test applied by Justice Harlan in *Katz*, and employed by the Court in *Kyllo*, stated that the Fourth Amendment requires two things—"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.'"[192] In order to constitute a Fourth Amendment search, there must be a subjective intent to keep the information private and that expectation must be objectively reasonable.[193] The individual must show that "he seeks to preserve [something] as private."[194] The objective component must be "'justifiable' under the circumstances."[195]

An airport is a public place. There is no issue with the sniffing devices in regard to those items that travelers make noticeable to the public as they pass through the airport because what a person knowingly exposes to the public is not protected by the Fourth Amendment.[196] Instead, the issue arises in two areas: (1) contents of packages carried on by passengers or checked by passengers, and (2) the sniffing of the person of individual travelers.

1. Whether Sniffing Technology is a Search of Passengers' Effects

Sniffing technology is analogous to canine dogs used by police to search for contraband because the idea is similar—sniff the air to determine

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188. *See supra* Part IV.

189. *See* DRESSLER, *supra* note 47, at 77.

190. *See, e.g., Biological Detection*, ICX TECHNOLOGIES, http://www.icxt.com/products/icx-detection/biological/.

191. *See* Kyllo v. United States, 533 U.S. 27, 29 (2001); Katz v. United States, 389 U.S. 347, 348 (1967).

192. *Kyllo*, 533 U.S. at 33; *Katz*, 389 U.S. at 361 (Harlan, J., concurring).

193. *Katz*, 389 U.S. at 361 (Harlan, J., concurring).

194. Smith v. Maryland, 442 U.S. 735, 740 (1979) (quoting *Katz*, 389 U.S. at 351).

195. *Id.* (quoting *Katz*, 389 U.S. at 353).

196. *See Kyllo*, 533 U.S. at 31-32; *Katz*, 389 U.S. at 351.

merely the presence of contraband or other substances. The analogy is helpful, but it does not tell the whole story because canine dogs simply "disclose[ ] only the presence or absence of narcotics."[197] The technology created by ICx Technologies, however, recognizes the chemical compounds of substances and is not limited the mere detection of the presence or absence of a substance.[198] Bearing in mind these distinctions, this analysis will proceed with the police dog cases due to the similarities.

In *United States v. Place*, the Supreme Court held that a canine sniffing luggage at a public place is not considered a search under the Fourth Amendment.[199] The Court recognized that the content of a traveler's luggage is protected by the Fourth Amendment, but a canine sniff is not a search of that luggage.[200] The Court reasoned that the canine does not expose personal items that would not ordinarily be exposed to the public, which follows the idea that the Fourth Amendment protects what a person seeks to preserve as private, even in public.[201] The Eighth Circuit has stated that "[t]he fact that the dog, as odor detector, is more skilled than a human does not render the dog's sniff illegal."[202] If evidence is in the plain smell of an officer or police dog, there is no reasonable expectation of privacy, and the "smell may be detected without a warrant."[203]

While the contents of the luggage may have Fourth Amendment protections, the airspace surrounding that luggage is not afforded Fourth Amendment protections.[204] Based on the police dog case law, sniffing technology would not constitute a search under the Fourth Amendment because the air around the bag would not be protected from a canine in a public place, such as an airport.[205] Nonetheless, the justification used to support the Supreme Court's conclusion that canine sniffs do not constitute a search was that "[w]e are aware of no other investigative procedure that is so limited both in the manner in which the information is obtained and in the content of the information revealed by the procedure."[206] Whether or not the use of sniffing technology used at Sunport is a search may

197. *See* United States v. Place, 462 U.S. 696, 707 (1983).

198. *See, e.g.*, *ChemSense 600*, *supra* note 166. As noted earlier, the technology also has the potential to identify the person and store the data associated with the detection, and it is unclear what the use of that information is and how it is stored. *See supra* Part V.

199. *Place*, 462 U.S. at 707. The Court stated, "[a] 'canine sniff' by a well-trained narcotics detection dog, however, does not require opening the luggage. It does not expose non-contraband items that otherwise would remain hidden from public view, as does, for example, an officer's rummaging through the contents of the luggage." *Id.*

200. *Id.* at 706-07.

201. *Id.* at 707; Katz v. United States, 389 U.S. 347, 351 (1967).

202. United States v. Roby, 122 F.3d 1120, 1124-25 (8th Cir. 1997) (citing United States v. Sullivan, 625 F.2d 9, 13 (4th Cir. 1980)).

203. *Id.* at 1125 (citing United States v. Harvey, 961 F.2d 1361, 1363 (8th Cir. 1992)).

204. United States v. Lovell, 849 F.2d 910, 913 (5th Cir. 1988).

205. *See id.*

206. *Place*, 462 U.S. at 707. The Court, in this statement, is referring to its discussion that the sniff only notifies the authorities of the presence or lack thereof of narcotics. *Id.*

ultimately be determined by the amount of information collected and stored and how that information is then used.[207] The Court authorized the use of canines in part because it is a very limited means of collecting information.[208] Accordingly, the canine sniff is less intrusive than the sniff technology that stores data and has the ability to detect numerous specific substances.[209] Therefore, as it stands, sniffing technology is not the least intrusive means, but this Comment will suggest ways in which airports can meet this standard in the sections below.[210]

2. *Whether Sniffing Technology Constitutes the Search of a Person*

The next issue is whether or not sniffing technology is a search of the person. Because the technology's main goal at the outset of implementation was to detect anthrax, a bacteria, the technology is presumably able to detect more bacteria, and potentially, viruses.[211] The technology is set up to detect chemical, biological, and nuclear threats.[212] While the information is unclear as to all the substances that the technology may detect, one may conclude that there are chemical compounds in or on every individual—shampoo, perfume, medicines, etc. Additionally, there may be biological compounds in or on individuals that are bacterial, including bacteria such as mycobacterium tuberculosis, commonly known as tuberculosis.[213] Therefore, sniffing technology potentially has the ability to detect agents within an individual's body that would not be visible to the naked eye.[214]

Whether the sniffing of a person is a search is analogous to canine sniffs. The Supreme Court has not addressed the issue of whether a canine sniff of a person constitutes a search, and until it addresses this issue, lower courts will deal with the issue differently.[215] Currently, there is a split between the circuits as to whether a dog sniff is a search.[216] The Fifth and Ninth Circuits, for example, have held that a canine sniffing of a person is

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207. *See id.*; *supra* Part V.A.

208. *See Place*, 462 U.S. at 707.

209. *See id.* Canines are used in some airports, although they only sniff luggage and not passengers. Chuck Conder and Kara Finnstrom, *Are Dogs the Key to Bomb Detection at Airports?*, CNN (Dec. 30, 2009, 4:47 PM), http://www.cnn.com/2009/TRAVEL/12/30/bomb.sniffing.dogs/. Had Umar Farouk Abdulmutallab been sniffed by a police canine on December 25, his explosives could very well have been detected. *See id.*

210. *See infra* Part VII.

211. Hartranft, *supra* note 44; *see supra* Part V.A.

212. *See supra* Part V.

213. *See Tuberculosis*, MEDICINENET.COM, http://www.medicinenet.com/tuberculosis/article.htm (last visited Sept. 23, 2010).

214. *See supra* Part V.

215. *See supra* Part V.

216. *See infra* text accompanying notes 217-18.

indeed a search.[217] On the other hand, the Seventh Circuit held that canine sniffing of a person is not a search.[218] Therefore, if the Supreme Court decides that dog sniffs of the person do not automatically violate the Fourth Amendment, then courts who consider this sniffing technology would consider that ruling in this context with the addition of more advanced capabilities of this technology.

The courts must then consider the extra factor of sniffing odors that come from the interior of the body. The technology searches odors from the interior of the body—not by traveling inside the body, but by sniffing secretions outside the body of substances that are contained inside the body.[219] In the closest case that deals with searches of the interior of the body, *Schmerber v. California,* the Court stated that a compulsory blood test is a search within the context of the Fourth Amendment.[220] The blood test was considered to be a search of the interior of the defendant's body, much like sniffing technology is capable of sniffing the odors from the interior of the body.[221] Courts have held that "invasions of the body are searches, and thus, are entitled to the protections of the Fourth Amendment."[222] The courts will have to interpret the meaning of the Ninth Circuit's ruling that "invasions of the body are searches."[223] The courts must decide whether the invasion of the body was the needle prick or the actual examination of data from inside the body.[224] Here, because the technology is collection of data from odors originating from inside the body, courts will likely decide that there is an invasion of the body, and thus, a search.

B. Airport Searches: Is the Search of the Person Reasonable in Light of the Special Circumstances of Air Travel?

The sniffing of luggage is not a search under the Fourth Amendment, but sniffing the interior of the body would constitute a search under the Fourth Amendment in some courts.[225] As previously discussed, searches in airports are generally justified on the grounds that the search is part of a general regulatory scheme and each person is subject to the same

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217. United States v. Kelly, 302 F.3d 291, 294 n.1 (2002); B.C. v. Plumas Unified Sch. Dist., 192 F.3d 1260, 1266 (9th Cir. 1999); Horton v. Goose Creek Indep. Sch. Dist., 690 F.2d 470, 479 (5th Cir. 1982).

218. Plumas Unified Sch. Dist., 192 F.3d at 1266 (citing Doe v. Renfrow, 631 F.2d 91, 92 (7th Cir. 1980)).

219. *See supra* Part V.

220. Schmerber v. California, 384 U.S. 757, 767 (1966); *see supra* Part II.C.3.

221. *Schmerber*, 384 U.S. at 767; *see* DRESSLER, *supra* note 47, at 90.

222. Friedman v. Boucher, 580 F.3d 847, 852 (9th Cir. 2009) (citing Skinner v. Ry. Labor Executives' Ass'n, 489 U.S. 602, 616-17 (1989)).

223. *Id.*

224. *See id.* at 852-53.

225. *See supra* Part VI.A.

treatment.[226] Sniffing technology is located at stationary points around the airport, so travelers would be subject to the same treatment—they would be sniffed as they pass the detection boxes.[227] Although sniffing technology is part of a general regulatory scheme, the search must still be reasonable under the Fourth Amendment to be valid.[228] To assess reasonableness, there are two important factors to consider: (1) a passenger's ability to consent or walk away and not board a plane, and (2) the danger involved as the reason for conducting the search.[229]

1. A Passenger's Ability to Consent or Walk Away and Not Board a Plane

Some courts justify airport searches, not on the fact that they are administrative searches, but because "all individuals who present themselves for entry on an airplane, regardless of suspicion, are subject to a reasonable search," and thus, have given implied consent.[230] Consent makes a search reasonable; however, the issue is whether a citizen has the right to refuse the search.[231] In regard to a warning informing citizens of the right to refuse the search, the Court has stated, "the totality of the circumstances must control, without giving extra weight to the absence of this type of warning."[232] Whether a search is reasonable depends on factors such as "public necessity, effectiveness, and degree of intrusion."[233] With both approaches, regulatory scheme and implied consent jurisdictions, the ability to consent to the search is important.[234] There is not any information regarding the exact placement of sniffing technology in the airport; however, the local news in Albuquerque reported that the boxes "are placed in so-called 'dirty' areas of the Sunport—places with lots of people and room for contamination."[235] Therefore, these boxes could be located in the areas even before security because the check-in areas and waiting areas are certainly high-traffic areas.[236] Solely in regard to consent, sniffing technology may be over-inclusive because, rather than searching only those presenting themselves for air travel, the technology may sniff anyone walking in the terminal entrance if the technology is included in those open areas before security.[237] The location of the boxes is an issue for proper

226. Kornblatt, *supra* note 43, at 393.
227. *See, e.g.*, *Biological Detection*, *supra* note 190.
228. Kornblatt, *supra* note 43, at 393 (citing United States v. Davis, 482 F.2d 893, 910 (9th Cir. 1973)).
229. *Id.* at 394-95.
230. Mock, *supra* note 125, at 233.
231. *See* United States v. Drayton, 536 U.S. 194, 206-08 (2002).
232. *Id.* at 207.
233. Mock, *supra* note125, at 233.
234. *Id.*; Kornblatt, *supra* note 43, at 394-95.
235. Anderson, *supra* note 15.
236. *See id.*
237. *See* Mock, *supra* note125, at 233.

implementation and is important both for the factors in a regulatory scheme jurisdiction and an implied consent jurisdiction.[238]

Another concern is the ability to consent to the search when the detection devices are not readily visible.[239] Joseph Rodriguez, facilities manager for Sunport, stated that "you stand underneath [sniffing technology] and you don't even know what it is and that's the way it is supposed to be."[240] These boxes are intended to be inconspicuous to passengers traveling through the airport.[241] When a person enters an airport, the security lines are visible. The magnetometer machines are systems that each passenger knowingly walks through, and the X-ray machines scanning luggage are also visible. Therefore, a person has the ability to see the search required of him and turn around and walk away if necessary. On the other hand, these sniffing devices are not readily noticeable—there is no information indicating that there are signs warning travelers of their existence, and there is no line that passengers must walk through to be sniffed.[242] The local news stated that "[n]early seven million people fly in and out of the Sunport every year, but it's not likely many of them will notice the white boxes silently sniffing the air around them."[243] These boxes are not readily visible for travelers to consent to the search of their bodies.[244] The traveler does not have the ability to see the search and decide to go through it and board the plane or walk away.[245] One cannot consent to a search that one does not know exists. The lack of consent could create problems for this technology under the reasonableness assessment of the search of a traveler's body.[246] In contrast to *United States v. Drayton*, there is no knowing consent to this search.[247]

2. The Danger Involved as the Reason for Conducting the Search

Under both approaches, the danger involved is a consideration in determining the reasonableness of the search.[248] In the unforgettable attack

238. *Id.*; Kornblatt, *supra* note 43, at 394-95.
239. *See* Anderson, *supra* note 15.
240. *Id.*
241. *See id.*
242. *See id.*
243. *Id.*
244. *See id.*
245. *See id.*
246. *See id.*
247. United States v. Drayton, 536 U.S. 194, 207 (2002). The Court stated that "[p]olice officers act in full accord with the law when they ask citizens for consent." *Id.* There are no facts that indicate that travelers are asked for their consent to this search by sniffing machines.
248. Kornblatt, *supra* note 43, at 394-95; Mock, *supra* note 125, at 233.

of September 11, 2001, over 2,600 people lost their lives.[249] The financial losses incurred as a result of this tragic event may well exceed $100 billion.[250] These deaths and financial damages were caused by nineteen people.[251] There is no question that the risk of danger in airports is significant.[252] The danger alone may satisfy the reasonableness test.[253] Even under this standard, the search must be "conducted in good faith for the purpose of preventing hijacking or like damage and with reasonable scope and the passenger has been given advance notice of his liability to such a search so that he can avoid it by choosing not to travel by air."[254]

"Puffer machines" use similar technology to that used by sniffing devices.[255] Puffer machines are walk-through devices that were once implemented in many of the largest airports in the United States.[256] These machines are able to detect trace amounts of explosives.[257] As of 2007, no court had decided the constitutionality of these puffer machines, but the reasonableness test is likely to coincide with the reasonableness test for magnetometers, as long as there is no invasion of bodily privacy.[258] There is a distinction between the puffers and the sniffing technology in question: The puffers release air before collecting samples to look for explosives on passengers' hair, skin, or clothes.[259] The puffers still do not invade the interior of the body like sniffing technology does with its detection of bacteria and viruses.[260] The other distinction is that the puffer machines were installed as a walk-through device and were an obvious search of which passengers would be aware.[261]

If sniffing technology does not invade bodily privacy, meaning that it only sniffs the exterior of the body, the technology would satisfy the reasonableness test, provided that installation of the devices are done in such a way that the passenger would be able to consent to the search, just

249. THE 9/11 COMMISSION REPORT: FINAL REPORT OF THE NATIONAL COMMISSION ON TERRORIST ATTACKS UPON THE UNITED STATES, EXECUTIVE SUMMARY 1-2 (2004), *available at* http://govinfo.library.unt.edu/911/report/911Report_Exec.pdf [hereinafter 9/11 COMMISSION REPORT].

250. *How Much Did the September 11 Terrorist Attack Cost America?*, INSTITUTE FOR THE ANALYSIS OF GLOBAL SECURITY, http://www.iags.org/costof911.html.

251. 9/11 COMMISSION REPORT, *supra* note 249, at 2.

252. *See id.* at 1-2.

253. United States v. Skipwith, 482 F.2d 1272, 1276 (5th Cir. 1973).

254. *Id.* (quoting United States v. Bell, 464 F.2d 667, 675 (2d Cir. 1975)) (internal quotations omitted).

255. Eric Lipton, *Airport Device to Ease Need for Pat-Down*, N.Y. TIMES (June 16, 2005), http://www.nytimes.com/2005/06/16/national/16security.html?_r=1. The Transportation Security Administration has abandoned the puffer machine program since the New York Times article was written. *See TSA Scraps Airport Screening Program*, ASSOCIATED PRESS (May 22, 2009), http://www.msnbc.msn.com/id/30875442/.

256. Lipton, *supra* note 255.

257. *Id.*

258. Kornblatt, *supra* note 43, at 406-07.

259. Lipton, *supra* note 255.

260. *See id.*; *supra* Part V; *see, e.g.*, *ChemSense 600*, *supra* note 156.

261. Lipton, *supra* note 255.

like magnetometers.[262] Fourth Amendment rights would be a concern and the reasonableness test would not be satisfied if sniffing technology invades bodily privacy by sniffing odors from inside the body and detecting chemical compounds or bacteria located within the body.[263]

VII. IMPLEMENTATION OF THREATSENSE TECHNOLOGY TO ENSURE COMPLIANCE WITH THE FOURTH AMENDMENT

A. Properly Sniffing Passengers' Effects

The technology, as currently used, does not violate the Fourth Amendment insofar as it is consistent with *United States v. Place* and the use of canines to sniff the air around a person's luggage in a public place.[264] The sniffing of airspace around the luggage is not a search and therefore, does not violate the Fourth Amendment.[265] There is no need to consider the reasonableness test because there is no search.[266]

B. Properly Sniffing Passengers

Two issues are critical to make the search of the person reasonable: (1) ability to consent and (2) bodily privacy.[267] Finally, the fruits of the search should also be considered.[268]

1. Passengers Must be Provided the Ability to Consent to the Search

To implement this technology in compliance with the Fourth Amendment, travelers must have the ability to consent.[269] One author states,

> Passenger consent to airport screening searches and the general population's awareness of the forms of screening procedures employed at airports are critical components of the analysis of whether the Fourth Amendment will permit or prevent the use of emerging screening technologies. Both consent and awareness are aspects of reasonableness. The more the public knows about newer technologies and the more the

262. Kornblatt, *supra* note 43, at 406-07.
263. *See id.* at 407.
264. United States v. Place, 462 U.S. 696, 707 (1983).
265. *Id.*
266. *See* Kornblatt, *supra* note 43, at 394-95.
267. *See supra* discussion in Part VI.B.
268. *See infra* discussion in Part VII.B.3.
269. Kornblatt, *supra* note 43, at 394-95.

> public accepts their use, the greater the likelihood the technologies will be deemed reasonable searches under the Fourth Amendment.[270]

The facilities manager at Albuquerque airport nonetheless states that the public should not know what the boxes are.[271] None of the reports on the pilot program have indicated any sort of information conveyed to the public regarding these sniffing devices.[272] Additionally, ICx Technologies seems to pride itself on designing mechanisms that can be hidden from plain view.[273] Similar technology, such as the puffer machines, are still walk-through machines that are visible to the passengers, which provide the passenger the ability to knowingly consent to the search or turn around, walk away, and choose not to board an aircraft.[274] For proper implementation, passengers must be made aware of the technology such that passengers can consent to its use.[275] To be safe, the technology should also operate like a puffer machine in that it should be a walk-through, minimally invasive machine—accordingly, the case law that supports magnetometers could also support the use of this technology.[276]

2. *Sniffing Technology Should Not be Able to Detect Agents Below the Surface of the Skin*[277]

The puffer machines that are expected to be constitutionally permissible only release air as a means to collect any explosive components on the outside of a person.[278] ThreatSense sniffing technology can detect bacterial, chemical, and nuclear particles.[279] ICx Technologies even states that some of its devices can detect viruses such as smallpox.[280] In order to detect a virus, the detection device would have to be able to sniff below the surface of the skin because viruses are not readily detectable like explosives on the surface of skin.[281] The current ThreatSense technology would be an unreasonable search as to the interior of the person.

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270. *Id.*
271. Anderson, *supra* note 15.
272. *See, e.g., id.*
273. *See, e.g., Series 300, supra* note 175.
274. Lipton, *supra* note 255.
275. Kornblatt, *supra* note 43, at 394-95.
276. *See id.* at 406-07.
277. In asserting this policy position, the tradeoff between liberty and security would be important because if the courts decide that the technology cannot detect items within the body, then there is the potential for terrorists to use body cavities to store explosives. *See supra* Part I. At any rate, the best technology in place right now does not detect agents hidden in body cavities. *See* Hunter, *supra* note 10.
278. Lipton, *supra* note 255.
279. *See supra* Part V.
280. *See supra* text accompanying note 173.
281. *See AirSentinel 1000B, supra* note 171; *supra* Part VI.A.2.

Puffer machines are constitutionally sound because those machines do not invade bodily privacy.[282] Sniffing technology goes below the body's surface.[283] While the reasonableness test may be satisfied by the danger at stake, the search would be unreasonable in light of its invasiveness. Therefore, the use of the technology should be limited to searching for agents on the surface of the passengers.[284]

3. What Items May be Considered Fruits of the Search Must be Limited

One final concern in using this technology is the information gathered due to the search. The technology is able to collect and store data.[285] The use of this technology should be limited to searching for chemical, biological, or nuclear agents that constitute a threat to the airplane and its passengers.[286] Sniffing technology should not be permitted to sniff for illegal drugs on or within the person because "[u]se in this capacity would constitute an illegal search 'because airport searches are authorized only to identify objects or materials that are a threat to the safety of the airplane.'"[287] Overall, the technology can be implemented in compliance with the Fourth Amendment, but limitations on its use would be required.

VIII. CONCLUSION

This Comment has traced the constitutionality of the technology implemented at Sunport. ThreatSense technology is undoubtedly innovative. Sniffing technology does not constitute a search as to a person's luggage, so implementation for these purposes will not implicate the Fourth Amendment.[288] Sniffing technology used to search the interior of a person, however, is a search and implicates the Fourth Amendment.[289] For implementation in compliance with the Fourth Amendment, the technology should be sufficiently visible to provide travelers with the ability to consent or walk away, should not be able to search below the skin's surface, and the fruits of the search should be limited to items threatening to persons and airplanes. With these limitations, the technology would be implemented such that it complies with the Fourth Amendment.[290]

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282. Kornblatt, *supra* note 43, at 407.

283. *See supra* Part V; *supra* Part VI.A.2.

284. It is not clear, however, that the technology could indeed be limited in its sniffing capabilities to only sniff the exterior of a person. *See supra* Part V.

285. *See supra* Part V.

286. Kornblatt, *supra* note 43, at 406.

287. *Id.*

288. *See supra* Part VI.A.1.

289. *See supra* Part VI.A.2.

290. *See supra* Part VII.

More advanced technology is inevitable. As technology becomes more advanced and is used as a part of airport security, society has to take into account the tradeoff between security and liberty. While the security measures are absolutely invaluable in keeping American citizens safe, those security measures come at the cost of a restriction on civil liberties. The question Americans must ask is: What civil liberties are worth sacrificing? The Fourth Amendment provides protection against unreasonable searches and seizures, and that is a civil liberty that should not be sacrificed.