

Prying Eyes in the Sky: Visual Aerial Surveillance of Private Residences as a Tort

By Jeremy Friedman¹

How would you know if others were watching you from above? If, through surreptitious surveillance devices, other private actors were undertaking surveillance of you from airplane or satellite-based vantage points, how would you know? How would you feel, knowing that you were being observed, maybe even recorded, by inconspicuous individuals or by unmanned devices which were not readily observable—devices which could see you at all times but could not easily be seen by you, at any time? What if the area being observed from afar, by strangers, was your home and yard?

In the not-so-distant past, the rules of liability relating to visual aerial surveillance of private residences would have created clear liability in many cases—perhaps, a large majority of instances of visual aerial surveillance. Less than half of a century ago, some such cases would have been governed by the principle that observation from directly above a private residence was trespass, since the landowner owned all space above the land. The “ancient doctrine . . . *Cujus est solum ejus est usque ad coelum*” (“ad

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coelum”)² gave landowners property rights extending vertically to the heavens. Not all cases of aerial surveillance would have created liability under *ad coelum*: for example, it would not have been trespass of air rights if observation from above were done diagonally from above a public street adjacent to property being observed. But in earlier times, when technology was less advanced, there were few satellites and hovering aircraft, and telescopic devices for the enhancement of visual images were less powerful. Thus, the one type of visual aerial surveillance that would not have constituted trespass—diagonal overhead surveillance—would have been far less feasible (and thus less prevalent) than it is today.

But *ad coelum*, the rule that would have established clear liability in certain cases of aerial surveillance, was abolished in 1946. In that year, the Supreme Court’s *U.S. v. Causby* ruling on government takings characterized the sky as “a public highway.”³ Citing a federal statute that grants U.S. citizens a right to travel through navigable airspace, the Court explained that *ad coelum* was no longer a viable rule.⁴ The Court held that no Fifth Amendment taking⁵ had occurred where U.S. military flights’ noise and glare had caused a significant number of the plaintiff’s chickens to fly into walls out of fear, killing themselves⁶—thus rendering the plaintiff’s chicken business untenable.⁷ *Ad*

² *U.S. v. Causby*, 328 U.S. 256, 260–61 (1946) (“at common law ownership of the land extended to the periphery of the universe . . .”). See also Restatement (Second) of Torts § 159 cmt. g (1965) (“‘*Cujus est solum ejus est usque ad coelum*’ . . . taken literally, means that he who owns the soil owns upward unto heaven.”); 2A C.J.S. *Aeronautics & Aerospace* § 8 (1972).

³ *Causby*, 328 U.S. at 261, 264.

⁴ *Id.* at 260 (citing 49 U.S.C. § 403).

⁵ U.S. Const. amend. V.

⁶ *Causby*, 328 U.S. at 259 (“As many as six to ten of their chickens were killed in one day by flying into the walls from fright. The total chickens lost in that manner was about 150.”).

coelum was pronounced dead, an anachronism that had flown into the wall of change: “that doctrine [*ad coelum*] has no place in the modern world.”⁸

In the wake of the abandonment of *ad coelum*, an abyss emerged that left landowners unable to rely on established principles of air rights for protection from overhead surveillance. *Causby* left it unclear what principles, if any, would replace *ad coelum* to determine ownership of the airspace above pieces of land, in a world of increasing innovation. Though the Court dealt with certain extreme situations,⁹ it did not otherwise elucidate the meaning of the ruling. On the one hand, “property” is a “bundle of rights,”¹⁰ meaning that ownership of airspace need not be absolute; the sky could become a “public highway,” in certain respects, while still remaining private property, in other respects. To allow public use of the sky for transportation purposes was not tantamount to granting complete public ownership of the sky. The public gained the right to use the sky for the transportation, but landowners might still have retained the right to prohibit use of the sky for certain, if not all, other purposes. On the other hand, *Causby* might have converted airspace into, literally, a “public highway,” completely owned and regulated by the public; *Causby*’s holding, perhaps, was that landowners had gone from having absolute ownership of overhead airspace to having absolutely no rights to restrict

⁷ *Id.*

⁸ *Id.* at 261. *See also id.* at 266 (“The airplane is part of the modern environment of life, and the inconveniences which it causes are normally not compensable under the Fifth Amendment.”).

⁹ Government flights that render land below completely useless would be compensable takings of private property. *Id.* at 261. Government flights that are especially invasive, physically—interfering with land use or creating danger—would also be takings. *Id.* at 264–66.

¹⁰ *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 433 (1982) (citing *Kaiser Aetna v. United States*, 444 U.S. 164, 176 (1979)).

public use of the overhead sky. Ultimately, by not clearly specifying whether landowners had retained any rights, the *Causby* Court created a realm of uncertainty. Landowners were left without any clear protections against the use of the aerial surveillance technologies that emerged in the decades after the *Causby* ruling.

The vacuum that emerged in delineating air rights has not yet been filled in the decades after the *Causby* ruling, thus leaving subjects of aerial surveillance without any broad remedies. There is a significant judicial opinion that provides a remedy, in the narrow context of the surveillance of proprietary business information: in *E. I. duPont de Nemours & Co. v. Christopher*,¹¹ the Fifth Circuit held that a business was liable for making overhead observations to steal its competitor's trade secrets. There is also a Supreme Court concurring opinion that suggests the need for providing remedies to the subjects of aerial surveillance: Justice O'Connor's *Florida v. Riley*¹² concurrence recognizes that, in Fourth Amendment law, police surveillance from aircraft should be distinguished as more problematic than ground-level observation. Currently, however, there are no broad, binding principles of air rights that provide homeowners with established remedies against aerial surveillance.

While there are currently few general principles of air rights to elucidate the topic of visual aerial surveillance, there is a relatively new body of law that provides an alternative framework for analysis of aerial surveillance: privacy tort law. When a private residence is observed from an aerial vantage point, privacy laws clearly seem implicated—thus providing an alternative source of legal remedy to the now-amorphous

¹¹ *E. I. duPont de Nemours & Co. v. Christopher*, 431 F.2d 1012 (5th Cir. 1970).

¹² *Florida v. Riley*, 488 U.S. 445, 452, 454 (1989) (O'Connor, J., concurring) (police, from a helicopter at 400 feet, looked for marijuana at a private residence).

principles of air rights.¹³ This Note argues that private (non-police) visual aerial surveillance of private residences should presumptively constitute tortious intrusion—and would constitute intrusion in many states, if the intrusion doctrine were carefully interpreted. This Note argues that legislation should be enacted, to codify such a conclusion.

The argument is set forth in three parts. Part I spells out the basic problem that visual aerial surveillance of private residences creates troubling asymmetries of information, very similar to those created by wiretapping. Part II locates the problem of visual aerial surveillance within the context of privacy tort law, where intrusion law offers the best available remedy. Applied to ground-level surveillance, intrusion relies on contextual factors and generally provides a safe harbor for observations made from public vantage points. Such considerations provide results generally consistent with creating liability for aerial surveillance. Yet, admittedly, the doctrine of intrusion has flaws that limit its effectiveness. Part III sets forth a legislative solution to codify the proper application of intrusion law to aerial surveillance. Neither evidentiary difficulties nor effects on media and government defeat the value of such a solution.

¹³ The emphasis on private residences does not suggest in any way that other landowners might not also be entitled to remedies.

Surveillance of individuals on private property—but not their private residences—has been observed to be a troubling phenomenon. For example, in 1998 Michael J. Fox testified before Congress that he was troubled at his loss of privacy when, at his 1988 Vermont wedding, “helicopters recklessly jockeyed for position directly above our assembled families.” Protection from Personal Intrusion Act and Privacy Protection Act of 1998: Hearing on H.R. 2448 Before the House Committee on the Judiciary, 105th Cong. 9-11 (1998) (statement of Michael J. Fox, actor).

In the uproar following Princess Diana’s 1997 death in an accident involving paparazzi pursuit, calls for legal limitations on surveillance grew, but to quite limited avail. Michael J. Fox advocated for Congressional legislation—which ultimately yielded only a failed proposed bill—dealing with the “persistent chasing and intrusion into private property with long-lens cameras” (mentioning Princess Diana’s death).

At its core, the topic of this Note pertains to the larger question of the regulation of technology. Advances in technology allow surveillance devices to become increasingly powerful and common. Ultimately, though, technology should be a means to the ends of serving human beings, without the devices that we have created taking control of us, or being used to hinder basic values. A justified desire to avoid acting out of fear yields no simple solution. Some might argue that the call for protection of privacy reflects alarmist, unfounded fears that technology will become invasive; others may retort that the only obstacle preventing the legal system from responding to real problems posed by technology is a fear of confronting the new and unfamiliar. Only by spelling out the issues clearly and arriving at a reasoned, measured solution can the legal system avoid resembling the *Causby* chickens, whose fear spelled their own doom.

I. The Problem of Visual Aerial Surveillance

To address the problem of visual aerial surveillance, it is vital to define all relevant terms and to clarify the nature of the proposal offered in this Note; after such clarification, the problem can be more clearly elucidated, and its relevance to contemporary society can be explained.

A. Defining the Scope of the Problem

Due to the current protections offered by wiretap law, this Note focuses on visual surveillance; but the analysis here could be applied to observation through any of the

senses, to the extent that such observation were technologically feasible. Aerial surveillance, in this Note, simply refers to that occurring from aircraft (including both airplanes and helicopters), manned satellites, or unmanned satellites.

Surveillance is defined as the gathering of information of a fairly high level of detail.¹⁴ This Note would apply to any purposeful observation of people, such as market research, sociological study, investigation pursuant to a legal dispute (e.g., workers' compensation, divorce, fraud), or collection of personal information as a commodity for sale. Mere accidental noticing of information in the course of other activity, such as mapmaking or geological or topographical surveys, would generally not involve the intensity of observation that would classify as surveillance of a home or of a person.¹⁵

This Note focuses on the prospect of visual aerial surveillance occurring without the subjects having been informed. This Note strives to create a general remedy for prospective plaintiffs who are largely, if not wholly, unaware that any visual aerial surveillance has occurred. If the subjects were fully informed of the identity of the observer and the nature of the observations, including how and where records were to be stored and who would have access to them, then, presumably, the subjects could present very specific claims dependent on misuse or fraud. But because even the subject of surveillance who is notified that the surveillance is occurring would rarely, if ever, be able to verify basic information—such as the full extent of the observations or the manner

¹⁴ See Black's Law Dictionary 14659 (7th ed. 1999) (definition of "surveillance" as "*Close* observation or listening of a person or place in the hope of *gathering evidence*") (emphasis added).

¹⁵ Where conversations are accidentally overheard, no "surveillance" has taken place—see definition of "surveillance," *supra* note 14. See also *Com. v. Loudon*, 536 Pa. 180, 192, 638 A.2d 953, 959 (Pa. 1994) (refusing to find a justifiable privacy expectation on the part of day care center providers, regarding conversations that were audible next door).

in which data was being stored—this Note would not free from presumptive liability observers who notify their subjects. In actuality, in the absence of mandatory notification regulations, it is highly unlikely that many observers, such as those investigating fraud or divorce cases, would inform the subjects that surveillance was occurring.

This Note does not examine the possibility of causes of action that focus on the physically disruptive nature of close-to-the-ground conduct—i.e., trespass or nuisance claims. Such causes of action provide an inadequate remedy to the problem of visual aerial surveillance. Visual aerial surveillance may be conducted in a way that is simultaneously non-disruptive and nefarious. Remedies such as trespass¹⁶ and nuisance¹⁷

¹⁶ Aerial trespass actions would be ineffective in curtailing surveillance by aircraft.

First, to the extent that surveillance flights directly over a piece of land would be trespass under an *ad-coelum*-type standard, observers could avoid the problem by flying over adjacent, public property, and making observations diagonally, without trespassing, from treetops on neighboring property. David A. Koplow, *Back to the Future and Up to the Sky: Legal Implications of "Open Skies" Inspection for Arms Control*, 79 Cal. L. Rev. 421, 433 (1991). “[S]lant photography” . . . allows aircraft to monitor targets located many miles to the side.” *Id.* “The side-looking radar of the United States’ SR71 reconnaissance aircraft has a peripheral vision of up to 80 miles.” *Id.* at n.62 (citations omitted). See also Ashley C. Null, Note, *Anti-Paparazzi Laws: Comparison of Proposed Federal Legislation and the California Law*, 22 Hastings Comm. & Ent. L.J. 547, 554 (2000) (“[A]dvanced technology has made it easier to violate a person’s privacy without violating the laws intended to protect it. For instance, long range camera lenses, especially those mounted on helicopters, allow photographers to capture private moments at home without trespassing.”). In the case of satellites, the same reasoning applies; it would be extremely difficult from an evidentiary standpoint to prove that the satellite was directly above private property.

Secondly, *ad coelum* is no longer an inviolable principle of law: aerial trespass claims require a plaintiff to show more than just invasion of airspace above the property—a plaintiff must show that the altitude was too low and must also prove interference with an “existing use” of the land or imminent danger to persons or property. *Newark v. Eastern Airlines, Inc.*, 159 F. Supp. 750, 760 (D. N.J. 1958). Trespass must involve interference with “actual, as distinguished from potential, use,” Restatement (Second) of Torts § 159 cmt. k (1977), so that low flight where a property owner would have the right, under zoning laws, to own buildings at the altitude of the flight, would not be interference sufficient to constitute trespass, where such buildings were not actually erected. A large proportion of aircraft surveillance and all satellite surveillance would escape liability for aerial trespass.

¹⁷ Private nuisance claims could not adequately deal with the problems of visual aerial surveillance. Theoretically, aircraft surveillance could give rise to a private nuisance action, as “invasion of another’s interest in the private use and enjoyment of land.” Restatement (Second)

are of limited effectiveness and fail to capture the entire problem created by visual aerial surveillance—as a result, legislation creating liability for visual aerial surveillance would not be duplicative of trespass and nuisance law.

This Note deals primarily with creating tort liability for visual aerial surveillance done by non-police parties; police activity is considered briefly, in Part III, Section D, *infra*. Three Supreme Court cases spell out certain basic principles of police aerial surveillance.¹⁸ Yet these three cases do not fully resolve all aspects of the Fourth Amendment law on aerial surveillance.¹⁹

of Torts § 821D (1977). But in practice the tort is applied primarily to flights causing noise or other disturbances, or dangers, especially when the flights are quite frequent—typically, private nuisance would not extend much protection to privacy interests. *Id.* § 821D cmt. b (“an interest of personality [that] receives limited legal protection,” compared to the “much greater legal protection” of “freedom from annoyance and discomfort” related to disturbance).

¹⁸ In *California v. Ciraolo*, 476 U.S. 207 (1986), the U.S. Supreme Court ruled that officers’ naked-eye observation of a fenced-in backyard from a private plane at 1,000 feet, in an attempt to discern whether marijuana was being grown on the residence, was not a search.

In *Florida v. Riley*, 488 U.S. 445, 447–48, 450 (1989), the court declined to find that a search had occurred where, from helicopter at a height of 400 feet, police officers using no enhancing devices looked into a greenhouse, through openings in its roof and sides. The plurality states, “As a general proposition, the police may see what may be seen ‘from a public vantage point where [they have] a right to be.’” *Id.* at 449 (quoting *Ciraolo*, 476 U.S. at 213).

In *Dow Chemical Co. v. United States*, 476 U.S. 227, 229, 239 (1986), the court held that the EPA’s aerial photography of an industrial complex from heights as low as 1,200 feet could not be classified as a Fourth Amendment search. While the court cites the district court’s finding that the EPA had utilized the best aerial camera technology, capable of significant enhancing, *id.* at 230, the majority also states that the pictures “at issue in this case are essentially like those commonly used in mapmaking.” *Id.* at 231. The holding of *Dow Chemical* does not apply to surveillance of private residences. *See infra* note 35 (citing *Kyllo v. U.S.*, 121 S.Ct. 2038, 2043 (2001)).

¹⁹ In the most recent of the cases, *Riley*, there was no majority opinion, and the plurality opinion does not offer clear resolutions to various issues. Bradley W. Foster, *Warrantless Aerial Surveillance and the Right to Privacy: The Flight of the Fourth Amendment*, 56 J. Air L. & Com. 719, 748 (1991) (“There is little in the *Riley* plurality opinion to suggest that 400 feet is a necessary lower limit for helicopter surveillance.”). Though the *Riley* plurality stresses the fact that the helicopter was not violating any laws, *id.* (citing *Riley*, 488 U.S. at 451–52), there is no minimum legal height for helicopters, which to be lawful need only follow FAA administrator guidelines and avoid endangering persons or property. *Id.* (citing 14 CFR § 91.79(d) (1990) and *Riley*, 488 U.S. at 461 (Brennan, J., dissenting)).

Nor is Fourth Amendment law regulating police surveillance binding on the treatment of non-police surveillance. Fourth Amendment law is merely persuasive authority—in ruling on intrusion tort claims, courts rarely import Fourth Amendment principles.²⁰ In fact, privacy tort law influences Fourth Amendment law relating to technological innovation.²¹

Riley does not necessarily permit all helicopter surveillance:

At the conclusion of its opinion, the Court suggested that the presence of the following may give rise to a fourth amendment violation: (1) evidence that helicopters flying at the altitude in question are sufficiently rare so as to lend substance to an expectation of privacy, (2) observation of intimate details connected with the use of the home or curtilage, and (3) undue noise, wind, dust, or threat of injury.

Id. at 749 (citing *Riley*, 488 U.S. at 451). Such considerations clarify the “general proposition [that] the police may see what may be seen ‘from a public vantage point where [they have] a right to be.’” *Riley*, 488 U.S. at 449 (quoting *Ciraolo*, 476 U.S. at 213). Apparently, the police do not have a right to observe homes from everywhere that a helicopter can legally fly but rather are subject to limitations based on common usage of airspace, intimacy, and disruption.

²⁰ See *infra* note 89.

²¹ See Robert C. Power, *Criminal Law: Technology and the Fourth Amendment: A Proposed Formulation for Visual Searches*, 80 J. Crim. L. & Criminology 1, 109–10 (1989) (“Application of the fourth amendment to the use of technological devices requires an evaluation of societal values, and there is no better evidence of such values than *non-constitutional law* and practices concerning private use of a particular device. . . . If society had been unwilling to regulate [wiretapping], it would be difficult to conclude that society demands freedom from the same intrusions by law enforcement officers.” (citation omitted) (emphasis added)).

Fourth Amendment law holds surveillance of the interior or private homes to constitute a Fourth Amendment search where the surveillance technology used is not “in general public use,” see *infra* note 105 (*Kyllo* standard). Privacy tort law itself provides a source of influence on the level of technology that are legally permitted to be “in general public use.” Additional determinants of common societal practices in the use of technology are that limits of current technology make certain types of surveillance unfeasible and, also, that market constraints influence the determination of which technologies become inexpensive enough to reach large portions of society.

B. Reasons that Aerial Surveillance of Residences is Problematic

There are essentially three troubling aspects of visual aerial surveillance of private residences: the one-sided gleaning of information, the economic transfer from landowner to observer, and the violation of the sanctity of the home.

1. Asymmetry of “Meta-Information”

In aerial surveillance, pronounced asymmetries arise regarding the occurrence of the surveillance itself, i.e., “meta-information”²²: the subject of the observations does not know the identity of the observer, the frequency of observations, the manner in which the information is being stored, or the identity of the parties with whom the observer shares the information. The subject of surveillance has little or no “meta-information,”²³ while the observer has perfect “meta-information.”

The problem that the party being observed is defenseless, not able to even take note of the scope of the observations—thus being unable to contest the surveillance in

²² The term is used in David Brin, *The Transparent Society* 23 (1998): “Kevin Kelly, executive editor of *Wired* magazine . . . of information age journalism [said]: ‘The answer to the whole privacy question is more knowledge. More knowledge about who’s watching you. More knowledge about the information that flows between us—particularly the *meta-information* about who knows what and where it’s going.’”

“In other words, we may not be able to eliminate the intrusive glare shining on citizens of the next century, but the glare just might be rendered harmless through the application of more light aimed in the other direction. Nor is Kelly alone in this opinion among cyber-era luminaries. . . .” (emphasis added).

²³ The less conspicuous the surveillance, the less “meta-information” the subject of the surveillance will have.

any manner—has been noted in relation to police wiretapping.²⁴ Likewise problematic is the defenselessness of the subject of non-police surveillance. The subject of surveillance cannot monitor whether the observer poses any threat to the physical security of the subject, or whether the observer will sell or disseminate the information to parties with interests adverse to the subject—such as parties in business competition with the subject, or parties with personal enmity towards the subject.

Conceivably, information could fall into the hands of criminals whose plans would benefit from knowing the daily schedule of the home; their systematic knowledge of when the home would be unattended would render the property vulnerable, and their knowledge of the daily routine of the property owners could be used to harm the owners. Furthermore, the subject's dignity is compromised, since the subject cannot readily be aware of the actual uses of the information, such as to paint an unflattering picture of the subject in private communications.

A paradigm for dealing with surveillance in situations where there is large asymmetry of “meta-information” is audio surveillance law, under the Federal Wiretapping Act.²⁵ The Federal Wiretapping Act creates liability for all observations made through the asymmetrical surveillance technique of wiretapping. Wiretap law

²⁴ “[T]he usefulness of electronic surveillance depends on lack of notice to the suspect. In the execution of the traditional search warrant, an announcement of authority and purpose (‘knock and notice’) is considered essential so that the person whose privacy is being invaded can observe any violation in the scope or conduct of the search and immediately seek a judicial order to halt or remedy any violations. In contrast, wiretapping is conducted surreptitiously.” James X. Dempsey, *Communications Privacy in the Digital Age: Revitalizing the Federal Wiretap Laws to Enhance Privacy*, 8 Alb. L.J. Sci. & Tech. 65, 70 (1997) (citations omitted).

²⁵ Federal Omnibus Crime Control and Safe Streets Act of 1968 (the “Federal Wiretapping Act”), 18 U.S.C. § 2511.

Certain states have similar legislation. *See, e.g.*, Pennsylvania Wiretapping and Electronic Surveillance Control Act, 18 Pa. Const. Stat. §§ 5703, 5721, 5725.

protects information by virtue of the protected medium from which the information was intercepted (such as private phone communication),²⁶ without looking at any other factors; no weight is given to the interactions between the observer and the subject of surveillance, to the purpose of the surveillance, or to any other contextual factors.²⁷ Surveillance from the inherently asymmetrical vantage point of the wiretapping eavesdropper is per se unlawful.

Visual aerial surveillance law should follow the example set by the Federal Wiretapping Act. There is no valid distinction between visual and audio surveillance that mandates stronger protection of the latter.²⁸ Visual aerial surveillance often utilizes expensive equipment—perhaps more expensive than wiretapping equipment—thus making the asymmetry of information troubling as an exploitation of economic inequality.²⁹ Among economists and other commentators, there is ample support for

²⁶ *Bartnicki v. Vopper*, 121 S. Ct. 1753, 1761 (U.S. 2001) (“[T]he communications at issue are singled out by virtue of the fact that they were illegally intercepted—by virtue of the source . . .”).

The Federal Wiretapping Act provides both civil and criminal liability for wiretapping. *See* The Federal Wiretapping Act, *supra* note 25, § 4 and § 5.

²⁷ *But cf. infra* Part II, Section B, Subsection 1 (intrusion law can place a high emphasis on contextual factors).

²⁸ “[A]irplanes and helicopters are technological aids to surveillance not unlike wiretapping equipment.” Power, *supra* note 21, at 20. *See also infra* note 30.

²⁹ “The vantage point he enjoyed was not one any citizen could readily share. His ability to see over Riley’s fence depended on his use of a *very expensive and sophisticated* piece of machinery to which few ordinary citizens have access. In such circumstances it makes no more sense to rely on the legality of the officer’s position in the skies than it would to judge the constitutionality of the wiretap in *Katz* by the legality of the officer’s position outside the telephone booth.” Florida v. Riley, 488 U.S. 445, 460 (Brennan, J., dissenting) (emphasis added). Justice Brennan’s statement seems to imply that extremely expensive technology inherently would violate the Fourth Amendment standard of “reasonable expectation of privacy,” *see infra* note 133. The Supreme Court’s most recent ruling on the Fourth Amendment is consistent with such an interpretation. *Kyllo v. United States*, 121 S.Ct. 2038 (2001). *See also infra* note 105 (holding

providing remedies to rectify significant asymmetries of information,³⁰ including those resulting from visual surveillance.³¹

2. Appropriation of Value

The asymmetrical exchange of information creates a one-way flow of value, unjustly enriching the observer and detracting from the value of the land that is under surveillance. By compromising physical security and dignity, per the considerations in Part I, Section B, Subsection 1, *supra*, regarding asymmetry of “meta-information,” visual aerial surveillance lessens the value of the land that is under surveillance. The landowner cannot avoid surveillance without incurring enormous expenses associated with construction of overhead barriers; furthermore, overhead barriers themselves would block sunlight and would generally diminish the value of the land for tree and plant life and for other uses.³²

the use of technology not in “general public use” to discern what is in a house constitutes a Fourth Amendment search).

³⁰ See David Brin, *supra* note 22, at 24, stating, “Caltech professor John O. Ledyard points out that ‘asymmetric information conveys a monopoly position on the holder of the information that markets cannot easily overcome.’ Although they generally favor transparency, economists warn that information flows should be open *evenly* lest one side or another gain an unfair advantage during the transition—a gradualist approach that is supported throughout this book.”

Brin notes a perspective that might seem to argue against limitations on surveillance: “I don’t care so much about privacy. What have I got to hide that would interest anybody?” *Id.* at 25. But the problem with visual aerial surveillance is not merely the loss of “privacy”; rather, the problem is the *asymmetrical* surrendering of privacy. The problem is the lack of “transparency,” which is defined as all people having access to all information. *Id.* at 23.

³¹ Power, *supra* note 21, at 110 (“[I]t is imperative that the law regulate private use or else video surveillance may eventually be thought of as nothing more exotic than remote control binoculars.”).

³² Justice O’Connor stated:

The observer gains value. The use of information gained from visual aerial surveillance for purely commercial means, such as market research, is more economically troublesome as an unfair appropriation of value than would be the use of information for academic study, or to uncover facts related to legal disputes or other wrongdoing, e.g., a private investigator's investigation of wrongdoing. But even information that is not directly used in business would still confer upon the observer economic value that was obtained from the private residence, a non-public location.

3. Invasion of the Domestic Sphere of Privacy

Special privacy concerns arise when the loss of physical security and dignity occurs at a person's home. Security can be lost at public places, and dignity can be impinged upon through public discourse, such as defamation or libel; but security and dignity interests should receive special protection at the home. The first argument for the birth of privacy tort law in the U.S.,³³ presented in 1890 by Samuel D. Warren and Louis

[Individuals] can build a tall fence, for example, and thus ensure private enjoyment of the curtilage without risking public observation from the road or sidewalk. . . . In contrast, even individuals who have taken effective precautions to ensure against ground-level observations cannot block off all conceivable aerial views of their outdoor patios and yards without entirely giving up their enjoyment of those areas.

Riley, 488 U.S. at 454 (O'Connor, J., concurring).

The case of *E. I. duPont* in trade secret law, *supra* note 11, is simply a specific case of the more general problem of the use of visual aerial surveillance to appropriate value.

³³ Samuel D. Warren and Louis D. Brandeis, *The Right to Privacy*, 4 Harv. L. Rev. 193, 241 (1890), available at <http://freedomlaw.com/Brandeis.htm> ("The right to privacy . . . has already found expression in the law of France.").

The article by Warren and Brandeis is universally acknowledged to have originated the movement for privacy tort law in the U.S. See, e.g., Note, *Privacy, Technology, and the California "Anti-Paparazzi" Statute*, 112 Harv. L. Rev. 1367, 1369 (1999); Andrew D. Morton,

D. Brandeis, centered on the possibility of technology invading the home.³⁴ In determining the bounds of permissible police visual aerial surveillance, Fourth Amendment law recognizes the special interest in the home as a private sphere deserving of protection;³⁵ curtilage around homes would also be worthy of protection as part of the domestic sphere.³⁶

Comment, *Much Ado About Newsgathering: Personal Privacy, Law Enforcement, and the Law of Unintended Consequences for Anti-Paparazzi Legislation*, 147 U. Pa. L. Rev. 1435, 1438 (1999).

³⁴ Proposing legal recognition of the “right ‘to be let alone,’” Samuel D. Warren and Louis D. Brandeis, *supra* note 33, at 195 (quoting Thomas M. Cooley, *Cooley on Torts* 29 (2d ed. 1888)), stated that privacy rights were merely the logical extension of property law, whose umbrella had already expanded to include intellectual property. (“From corporeal property arose the incorporeal rights issuing out of it; and then there opened the wide realm of intangible property, in the products and processes of the mind, as works of literature and art, goodwill, trade secrets, and trademarks.” *Id.* at 193–95 (citations omitted)).

Eager to protect the rights of owners of residential property—i.e., to preserve the sanctity of “the domestic circle,” *id.* at 196—the authors wrote in response to a Boston *Saturday Evening Gazette* description of a house party put on by Warren. Jeffrey Rosen, *The Unwanted Gaze* 7 (2000).

³⁵ In the Fourth Amendment context, the Supreme Court has stated: “We have previously reserved judgment as to how much technological enhancement of ordinary perception from such a vantage point, if any, is too much. While we upheld enhanced aerial photography of an industrial complex in *Dow Chemical* [*Dow Chemical Co. v. United States*, 476 U.S. 227 (1986)], we noted that we found ‘it important that this is *not* an area immediately adjacent to a private home, where privacy expectations are most heightened,’ *Id.* at 237, n. 4 (emphasis in original).” *Kyllo*, 121 S.Ct. 2038 at 2043.

³⁶ *See supra* note 35 (the “area immediately adjacent to a private home, [is] where privacy expectations are most heightened”).

“[C]urtilage . . . refers to an area immediately adjacent to the home that is so intimately related with home life as to be part of the home itself and thus deserving of fourth amendment protection” Seth Ruzi, Comment, *Reviving Trespass-Based Search Analysis Under the Open View Doctrine: Dow Chemical Co. v. United States*, 63 N.Y.U. L. Rev. 191, 196–97 (1988) (referring to *Dow Chemical Co. v. United States*, 476 U.S. 227 (1986)).

“The protective reach of the home extends to its curtilage, typically including such areas as the front and back yards, garage, and other out-buildings ‘to which extend[] the intimate activity associated with the “sanctity of a man’s home and the privacies of life.”’” *Id.* at 204 (citations omitted).

See also Power, *supra* note 21, at 113 (citing *California v. Ciraolo*, 476 U.S. 207 (1986)).

Security and dignity concerns are most relevant regarding homes. Public places in nonresidential areas may have security by virtue of being heavily trafficked and heavily monitored by law enforcement officers, and privacy expectations may be diminished generally in nonresidential areas, implying that dignity is not compromised as much by observation.³⁷ While it might be desirable to create liability for visual aerial surveillance of areas other than private residences, such a proposal is beyond the scope of this Note, which focuses on the special protection that the home deserves.

C. The Problem's Large and Increasing Magnitude

Recent years have seen a growth in aircraft and satellite surveillance technologies. Surveillance technologies have become increasingly powerful: for example, satellites are capable of revealing an item below only a few square inches in size.³⁸ In addition, surveillance technologies have become increasingly common³⁹ and affordable.⁴⁰

³⁷ See Simson Garfinkel, *Database Nation: the Death of Privacy in the 21st Century* 93 (2000) (“Whereas we have a reasonable expectation of privacy in our own homes, there is no longer such an expectation for public places.”).

³⁸ See Koplou, *supra* note 16, at 434 (regarding “photoreconnaissance satellites, . . . estimates suggest a resolution capability under optimal conditions of as fine as a few inches”) (citations omitted).

See also John Fleming, *The Shocking Menace of Satellite Surveillance*, Pravda, July 14, 2001, available at <http://english.pravda.ru/main/2001/07/14/10131.html> (last visited Feb. 19, 2003) (on file with the Columbia Science and Technology Law Review) (“From more than five-hundred miles above earth, a satellite can sight a tennis ball, photograph it, and send back to earth an image as clear as if it had been taken on the court at ground zero.”) (quoting writer Sandra Hochman).

³⁹ “[S]atellite reconnaissance . . . —both by the superpowers’ military satellites and by privately owned commercial satellites operated for news-gathering and other purposes—is becoming more intrusive and pervasive.” Koplou, *supra* note 38, at 445 (citation omitted).

Technologies extend beyond satellite and conventional aircraft surveillance; now there are novel surveillance methods, such as remote-control helicopters equipped with cameras.⁴¹ There are automated devices—not requiring continuous human labor—that are capable of non-stop recording of vast amounts of information.⁴²

As surveillance technology has advanced, the possibilities for the exploitation of information have increased. In recent years, information has increasingly become a commodity⁴³— which means larger incentives exist for visual aerial surveillance. Information technology has grown, allowing more potential trading in information gleaned from surveillance technologies. Technology allows storage of increasingly large amounts of information, and technology allows faster and more voluminous traffic in information.⁴⁴ Legal commentators⁴⁵ and members of the popular press⁴⁶ have observed that aerial surveillance technologies pose a growing threat to privacy.

⁴⁰ Randy Ringen, *I spy . . . my neighbor*, FutureWatch, Dec. 27, 1999, at http://explorezone.space.com/columns/future_watch_1999/12_27_satellite.htm (last visited Feb. 19, 2003) (on file with the Columbia Science and Technology Law Review) (“Would you like to know what’s in your neighbor’s backyard, but the wall is too high? If so, for less than \$10 you can get a detailed photographic image of your neighbor’s yard, and the rest of your neighborhood, courtesy of commercial spy satellites.”).

⁴¹ Floatograph Technologies, at <http://www.floatograph.com/observer.html> (last visited Feb. 19, 2003) (on file with the Columbia Science and Technology Law Review) (“Each Floatograph RC Helicopter Pan Tilt System comes with a Canon Rebel SLR 35MM still camera and a Digital Camcorder.”).

⁴² James X. Dempsey, *Communications Privacy in the Digital Age: Revitalizing the Federal Wiretap Laws to Enhance Privacy*, 8 Alb. L.J. Sci. & Tech. 65, 67 (1997) (“The use of year-long wiretaps on multiple individuals in the ‘Pizza Connection’ drug trafficking case . . .”).

⁴³ See, e.g., Brin, *supra* note 22, at 57, on “The Commercialization of Personal Information” (stating that information about credit card usage, phone calls, and Internet usage has become a commodity, with a ready market).

⁴⁴ See Garfinkel, *supra* note 37, at 93 (“more and more of what happens in public is captured, recorded, indexed, and made retrievable . . .”). See also Julie E. Cohen, *Examined Lives: Informational Privacy and the Subject as Object*, 52 Stan. L. Rev. 1373, 1374 (2000) (“The rise

As technology makes surveillance potentially more feasible and pernicious, the importance of legal remedies increases. The option of providing no legal protection from surveillance becomes quite troublesome. Without the *ad coelum* doctrine, the law must turn to other sources that can provide protection.

II. Privacy Tort Law Applied to Surveillance

Though post-*ad-coelum* air rights law of trespass and nuisance fails to provide an adequate remedy to the problem of aerial surveillance,⁴⁷ privacy tort law can create air

of a networked society . . . has brought with it intense concern about the personal and social implications of . . . databases now, in digital form, capable of being rapidly searched, instantly distributed, and seamlessly combined with other data sources to generate ever more comprehensive records of individual attributes and activities.” (citations omitted).

⁴⁵ John R. Dixon, Note, *Criminal Procedure/Constitutional Law—Warrantless Aerial Surveillance And The Open View Doctrine—Florida v. Riley*, 109 S. Ct. 693 (1989), 17 Fla. St. U.L. Rev. 157 (1989) (“Aerial surveillance is an attractive investigative tool because it enables law enforcement officials to make observations they could not constitutionally obtain from ground-level without a warrant. This unique ability of aerial surveillance makes it both a boon to police investigation and an *unprecedented threat to individual privacy*.”) (emphasis added). See also Koplow, *supra* note 16, at 479 (“Under current jurisprudence . . . a change in public expectations [regarding the scope of ‘Open Skies’ non-search investigations] could restrict the coverage of the fourth amendment *precisely when its protections were most needed*.”) (emphasis added) (citation omitted).

⁴⁶ Fleming, *supra* note 38 (“Spy satellites . . . have little or no civilian use—except, perhaps, to subject one’s enemy or favorite malefactor to surveillance. . . . [T]he overriding evil of satellite technology . . . [is] it overwhelms powerless victims.”). See also Garfinkel, *supra* note 37, at 93 (“[T]he real threat lies in the systematic monitoring of public places, where ability and legality have created a surveillance free-for-all. Over the next 50 years, the widespread construction of monitoring networks will fundamentally change our understanding of what it means to be ‘in public.’”). See also Tim Jepson and Maggie O’Sullivan, *How do you like your paradise?*, The Sunday Telegraph (London), Jan. 14, 2001 at 10 (“[W]hat the super-rich are paying for [at private island vacation spots], I suspect, is not the food, the setting, the staff or the frills—for these prices you can have just about any frill or luxury you desire elsewhere. No, what they are paying for is the absolute certainty of privacy—no long lenses, no autograph-seekers, *no prying helicopters overhead* and no fawning or pointed fingers on the beach.”) (emphasis added).

⁴⁷ See *supra* notes 16, 17.

rights to provide protections to homeowners. The modernization that made *ad coelum* anachronistic helped motivate the 1890 article by Warren and Brandeis that marked the birth of privacy tort law⁴⁸; mentioning “[t]he intensity and complexity of life attendant upon advancing civilization” and “modern enterprise and invention,”⁴⁹ the authors warned of “the numerous mechanical devices [that] threaten” to strip homes of privacy.⁵⁰

A. Intrusion Law as the Best Remedy Currently Available

The field of privacy tort law protects security⁵¹ and dignity⁵²—the interests most severely threatened by aerial surveillance. Privacy tort law has developed four torts:

⁴⁸ Privacy tort law began with the article by Warren and Brandeis, *see supra* note 33. The body of privacy tort law gained widespread acceptance by 1960. *See Note, Privacy, Technology, and the California “Anti-Paparazzi” Statute, supra* note 33, at 1369 (citing William L. Prosser, *Privacy*, 48 Cal. L. Rev. 383, 383 (1960)).

⁴⁹ Warren and Brandeis stated, “*The intensity and complexity of life attendant upon advancing civilization* have rendered necessary some retreat from the world, and man, under the refining influence of culture, has become more sensitive to publicity, so that solitude and privacy have become more essential to the individual; but *modern enterprise and invention* have, through invasions upon his privacy, subjected him to mental pain and distress far greater than could be inflicted by mere bodily injury.” Warren and Brandeis, *supra* note 33, at 196 (emphasis added).

⁵⁰ Warren and Brandeis, *supra* note 33, at 195.

⁵¹ In ground-level surveillance cases, where a plaintiff’s physical security is threatened, the privacy tort of intrusion offers a remedy. *See* *Tompkins v. Cyr*, 995 F. Supp. 664, 673 (N.D. Tex. 1998) (the district court affirmed a portion of the jury verdict based upon an intrusion claim where the defendants, protesting against an abortion provider job, trespassed and made direct physical threats to the plaintiffs); *Souder v. Pendleton Detectives, Inc.*, 88 So.2d 716, 717 (La. App. 1956) (the lower court’s dismissal was reversed and the case was remanded where the defendant, a detective agency investigating a workers’ compensation case, allegedly trespassed and undertook surveillance in a manner “calculated to harass and invade the personal safety, comfort and privacy of the petitioner,” and the defendant allegedly violated Peeping Tom criminal statute). Also, one piece of scholarly literature considers anti-stalking law to protect “a privacy interest for women.” Carol E. Jordan et al., *Stalking: Cultural, Clinical and Legal Considerations*, 38 Brandeis L.J. 513, 540 (2000). Stalking law typically requires an actual threat to the person being stalked. *See, e.g.*, Ky. Rev. Stat. Ann. §§ 508.130–508.150 (Michie 1998).

intrusion,⁵³ appropriation,⁵⁴ private facts,⁵⁵ and false light.⁵⁶ Intrusion, consisting of invasive conduct “highly offensive to a reasonable person,”⁵⁷ “does not depend upon any publicity given to the person . . . or to his affairs.”⁵⁸ The other three privacy torts depend on misuse of information,⁵⁹ and thus are of limited value in many surveillance cases, appearing only in conjunction with intrusion claims.⁶⁰

⁵² See, e.g., Warren and Brandeis, *supra* note 33, at 196 (“invasions upon his privacy, subjected him [man] to mental pain and distress far greater than could be inflicted by mere bodily injury.”).

⁵³ Restatement (Second) of Torts § 652B (1977) (“intrusion upon the seclusion of another”).

⁵⁴ *Id.* § 652C (1977) (“appropriation of the other’s name or likeness”).

⁵⁵ *Id.* § 652D (1977) (“unreasonable publicity given to the other’s private life”).

⁵⁶ *Id.* § 652E (1977) (“publicity that unreasonably places the other in a false light before the public”).

⁵⁷ “One who intentionally intrudes, physically or otherwise, upon the solitude or seclusion of another or his private affairs or concerns, is subject to liability to the other for invasion of his privacy, if the intrusion would be highly offensive to a reasonable person.” *Id.* § 652B (1977).

⁵⁸ *Id.* § 652B cmt. a (1977).

⁵⁹ Appropriation involves “use” of another’s identity, *id.* § 652C, § 652C cmt. a, by impersonation or by unfounded implication that a plaintiff has endorsed or is otherwise affiliated with a defendant or a defendant’s business, *id.* illus. 1–8.

One requirement of private facts is publicity: “‘Publicity,’ . . . means that the matter is made public, by communicating it to the public at large, or to so many persons that the matter must be regarded as substantially certain to become one of public knowledge. . . . Thus it is not an invasion . . . within the rule stated in this Section, to communicate a fact concerning the plaintiff’s private life to a single person or even to a small group of persons.” *Id.* § 652D cmt a.

False light occurs where a defendant misrepresents aspects of a plaintiff’s life or work. *Id.* § 652E illus. 1–5.

⁶⁰ *E.g.*, *Aisenson v. American Broadcasting Co.*, 269 Cal. Rptr. 379, 387–88 (Cal. Ct. App. 1990) (false light and intrusion); *Swerdlick v. Koch*, 721 A.2d 849, 857–59 (R.I. 1998) (private facts and intrusion).

By contrast, intrusion claims appear without any other privacy tort claims in numerous cases. See, e.g., *Tompkins v. Cyr*, 995 F. Supp. 664, 684–85 (N.D.Tex. 1998); *Wolfson v. Lewis*, 924 F. Supp. 1413, 1419–21 (E.D.Pa. 1996); *I.C.U. Investigations, Inc. v. Jones*, 780 So.2d 685, 689 (Ala. 2000); *Souder v. Pendleton Detectives, Inc.*, 88 So.2d 716, 717–18 (La. App. 1956); *Saldana v. Kelsey-Hayes Co.*, 178 Mich. App. 230, 232, 443 N.W.2d 382, 383 (Mich. Ct. App. 1989); *York v. Gen. Elec. Co.*, 759 N.E.2d 865 (Ohio Ct. App. 2001).

The tort of intentional infliction of emotional distress (“IIED”)⁶¹ also applies to privacy⁶² but is less effective than intrusion as a remedy for surveillance. IIED generally requires a lower minimum culpability standard, recklessness,⁶³ than intrusion’s standard of intent.⁶⁴ But IIED is less commonly used than is intrusion⁶⁵ as a tort remedy⁶⁶ for

⁶¹ The tort is also commonly referred to as “outrage,” *e.g.*, *Armstrong v. H & C Communications, Inc.*, 575 So.2d 280, 281–82 (Fla. Dist. Ct. App. 1991), and “Outrageous Conduct Causing Severe Emotional Distress,” Restatement of the Law, Second, Torts, § 46 (1965) (“One who by extreme and outrageous conduct intentionally or recklessly causes severe emotional distress to another is subject to liability for such emotional distress, and if bodily harm to the other results from it, for such bodily harm.”).

⁶² IIED is not one of the four privacy torts: IIED can be applied to many issues not related to privacy, such as battery or false imprisonment. *See* David A. Elder, *The Law of Privacy* 35–36 (1991).

⁶³ Restatement of the Law (Second) Torts, § 46(1). Where it is termed “intentional infliction of emotional distress,” as opposed to the Restatement’s “Outrageous Conduct Causing Severe Emotional Distress,” the standard is still often recklessness. *See* *Sheehan v. United States*, 896 F.2d 1168, 1171 (9th Cir. 1990) (citing Restatement (Second) of Torts § 46 (1965)); *Cummings v. W. Trial Lawyers Ass’n*, 133 F. Supp. 2d 1144, 1157 n.9 (D.Ariz. 2001) (“the defendant must either intend to cause emotional distress or recklessly disregard the near certainty that such distress will result”) (citations omitted); *Delorean v. Cork Gully*, 118 B.R. 932, 947 (E.D.Mich. 1990). *But see* *Oldfather v. Ohio Dep’t of Transp.*, 653 F. Supp. 1167, 1181 (S.D. Ohio 1986) (actual or constructive knowledge that “that the actions taken would result in serious emotional distress”).

⁶⁴ *See supra* note 57 (Restatement (Second) of Torts § 652B (1977) excerpt).

⁶⁵ The two claims can both be pleaded in the same case. *E.g.*, *Tompkins v. Cyr*, 995 F. Supp. 664, 670–74, 682–84 (N.D.Tex. 1998), *Swerdlick v. Koch*, 721 A.2d 849, 857, 862–63 (R.I. 1998). In *Swerdlick*, the plaintiffs also brought a negligent infliction of emotional distress claim, which was dismissed because that tort is limited to dangerous physical situations involving the plaintiff directly or as a bystander. *Id.* at 864. Truly remote, distant surveillance would not create a claim under that tort.

One empirical examination suggests that when the two actions are brought together, courts rarely reach different results as to whether there is liability. David A. Elder, *The Law of Privacy* 29 (1991). That empirical examination belies the likelihood that in some cases where only one of the two tort claims was brought—and perhaps gains damages—the other tort claim was not brought because it was thought likely to fail. For example, where distress is minor, IIED would not be brought.

Elder never suggests that damages would be equal under the two tort claims.

surveillance.⁶⁷ Most likely, the reasons that IIED is a less common remedy for surveillance are that IIED seemingly requires conduct more “extreme” or “outrageous”⁶⁸ than that simply “highly offensive to a reasonable person,”⁶⁹ and that IIED requires actual “severe emotional distress.”⁷⁰

Privacy legislation extending beyond the bounds of the common law is relatively sparse, with one exception. A 1998 California statute⁷¹ creates tort liability⁷² for the

⁶⁶ Criminal law, while not providing damages for intrusion, does influence tort law. *See, e.g.,* Souder, *supra* note 51 (the existence of a Peeping-Tom criminal statute leads to reversal of lower court’s dismissal of an intrusion claim). *See also* Morton, *supra* note 33, at 1445.

⁶⁷ *See supra* note 60, listing intrusion cases resulting from surveillance; other than *Swerdlick* and *Tompkins*, *supra* note 65, none of the cases mentioned in note 60 had IIED claims. By contrast, there do not seem to be any cases in which surveillance leads to an IIED claim, with no accompanying intrusion claim.

⁶⁸ *See supra* note 61 (definition from Restatement of the Law, Second, Torts, § 46 (1965)).

⁶⁹ *See supra* note 57. *See also* David A. Elder, *The Law of Privacy* 28–29 (1991).

⁷⁰ Restatement of the Law, Second, Torts, § 46(2), § 46 cmt. i (1965).

By contrast, the Restatement requirement of degree in intrusion is that “the interference with the plaintiff’s seclusion is a substantial one.” Restatement (Second) of Torts § 652B cmt. d (1977). Thus, a particularly hardy plaintiff who is not distressed by a substantial interference would have no IIED claim but would have an intrusion claim. *See* David A. Elder, *The Law of Privacy* 28–29 (1991).

⁷¹ Cal. Civ. Code § 1708.8(b) (2001) states: “A person is liable for constructive invasion of privacy when the defendant attempts to capture, in a manner that is offensive to a reasonable person, any type of visual image, sound recording, or other physical impression of the plaintiff engaging in a personal or familial activity under circumstances in which the plaintiff had a reasonable expectation of privacy, through the use of a visual or auditory enhancing device, regardless of whether there is a physical trespass, if this image, sound recording, or other physical impression could not have been achieved without a trespass unless the visual or auditory enhancing device was used.”

⁷² A defendant is liable for treble proximately caused damages, in addition to punitive damages and disgorgement from resulting commercial gain. *Id.* § 1708.8(c).

attempt to “capture”⁷³ activity of a “personal or familial” nature through the use of devices⁷⁴ that allow monitoring of events that could not otherwise be observed without trespass. But a plaintiff has no claim when observation is pursuant to suspected unlawful or fraudulent activity.⁷⁵

Overall, then, the best widely-available remedy to visual surveillance is the intrusion tort. Intrusion is, empirically,⁷⁶ the most favored remedy to surveillance. The other three privacy torts, as well as IIED and California’s statute, each potentially supplement the intrusion tort. But intrusion remains the bedrock protection against unwanted surveillance.

⁷³ For the proposition that liability in intrusion common law is not predicated upon any attempt to “capture” observations, see June Mary Z. Makdisi, *Genetic Privacy: New Intrusion A New Tort?*, 34 Creighton L. Rev. 965 (2001).

Makdisi discusses *Daily Times Democrat v. Graham*, 162 So.2d 474 (Ala. 1964), the “Fun-house case” which is the basis for Restatement (Second) of Torts 652B cmt. c (1977). 34 Creighton L. Rev. at 998 n.201. Makdisi states: “Even if the defendant had not snapped any photos, the conduct of becoming a ‘peeping tom’ would suggest a viable cause of action for intruding upon Graham’s seclusion. The dissemination through the press, of course, greatly increased damages.” *Id.* at 1026 n.201.

⁷⁴ The statute does not distinguish between mechanical non-stop recording and other observation.

⁷⁵ The bill excludes from liability all investigations of unlawful activity—including but not limited to the “violation of any administrative rule or regulation,” or “any . . . fraudulent conduct or activity involving a violation of law or pattern of business practices adversely affecting the public health or safety . . .” that is “supported by an articulable suspicion.” Cal. Civ. Code § 1708.8(f). Thus any surveillance regarding workers’ compensation claims—*e.g.*, *Souder*, 88 So.2d at 717 (the lower court’s dismissal of the intrusion claim was reversed)—would be exempted from liability, under the statute.

⁷⁶ See *supra* note 60.

B. Application of Intrusion Law to Visual Aerial Surveillance

Before applying intrusion doctrine to the problem of visual aerial surveillance, it is important to address two threshold considerations. First, particular limitations of two states' intrusion law would preclude any intrusion liability for any surveillance where the defendant did not physically trespass.⁷⁷ But in the prevailing majority of states, intrusion could potentially create liability, even in the absence of trespass. Secondly, there can be intrusion liability for surveillance even where no persons were observed. Privacy may be assaulted by surveillance of the home itself, even when no persons are present; interference with a person physically is not an element of intrusion.⁷⁸

1. The Role of Contextual Factors

Because intrusion claims often depend on context, with special attention to the defendant's purpose, it is difficult to generalize that all visual aerial surveillance is "highly offensive to a reasonable person," the intrusion standard. Intrusion is commonly

⁷⁷ In Maine and Georgia, trespass, or "physical intrusion," is a prerequisite to intrusion claims. *Pierson v. News Group Publications, Inc.*, 549 F. Supp. 635, 640 (S.D. Ga. 1982) ("An essential element of this tort is a physical intrusion analogous to a trespass."). *See also* *Nelson v. Maine Times*, 373 A.2d 1221, 1223 (Me. 1977); Note, *Privacy, Technology, and the California "Anti-Paparazzi" Statute*, *supra* note 33, at 1373.

Under current intrusion doctrine in Maine and Georgia, visual aerial surveillance would not be tortious; but the proposed legislative solution, *see infra* Part III, would alter that outcome and provide for liability in all states, if adopted on the federal level; this Note proposes that the legislative solution proposed be adopted either on the federal level (pursuant to Congress' power to regulate interstate commerce, U.S. Const. art. I, § 8, cl. 3) or else by *all* states, individually.

⁷⁸ *See* David A. Elder, *The Law of Privacy* 36 and 36 n.77 (1991).

described as a totality-of-circumstances standard,⁷⁹ with contextual factors potentially playing a large role. One key contextual consideration is whether the defendant's purpose was legitimate. Where defendants gather information as evidence in a pre-existing legal dispute, courts have dismissed claims even under circumstances in which the invasion of privacy appears extreme. In *Plaxico v. Michael*, the defendant made records of information of a highly intimate nature: through a window of the plaintiff's home, the defendant photographed the plaintiff and the plaintiff's lover in bed, for evidence in child-custody proceedings.⁸⁰ In *Saldana v. Kelsey-Hayes Co.*, the defendant used enhancing equipment to view the interior of the plaintiff's home, pursuant to a workers' compensation case.⁸¹ In both *Plaxico* and *Saldana*, a legitimate purpose was dispositive in eliminating liability.⁸²

⁷⁹ See, e.g., *Deteresa v. American Broadcasting Companies, Inc.*, 121 F.3d 460, 465 (9th Cir. 1997); *Salazar v. Golden State Warriors*, 2000 WL 246586, at *3 (N.D.Cal. Feb 29, 2000) (subsequent to adoption of 1998 California Statute); *Wolfson v. Lewis*, 924 F. Supp. 1413, 1434 (E.D. Pa. 1996).

⁸⁰ *Plaxico v. Michael*, 735 So.2d 1036 (Miss. 1999).

The defendant wanted to modify a child custody relationship on the basis of his ex-wife's having a lesbian relationship, *id.* at 1038; for the custody proceedings, the defendant sneaked outside his ex-wife's cabin and photographed her and her lover, the plaintiff, semi-nude in bed. *Id.*

⁸¹ *Saldana v. Kelsey-Hayes Co.*, 443 N.W.2d 382 (Mich. Ct. App. 1989).

The defendants were the plaintiff's employer and supervisor, who hired a private investigation firm to verify the plaintiff's alleged injuries sustained at work. By naked eye and with a strong camera lens (1,200 mm) investigators—situated in a car parked on the street and also walking by the plaintiff's house—viewed the plaintiff through windows of his home. *Id.* at 383.

⁸² In *Plaxico*, applying the intrusion standard of conduct highly offensive to a reasonable person, the majority held that “most . . . people” would feel that the purpose “justified” the defendant's actions and “[t]herefore” there is no claim. 735 So.2d at 1040.

In *Saldana*, the court stated that viewing the inside of a home with a powerful lens would present a strong enough claim to reach a jury, 443 N.W.2d at 384; but the court affirmed summary judgment for the defendants based on the purpose of the surveillance—the court found that the defendants were investigating for a legitimate purpose, in attempting to discern the true nature of the employee's health and his ability to return to work. *Id.* at 384.

But in certain instances of visual aerial surveillance, inquiries into contextual factors—especially with regard to the purpose of surveillance—would be futile. The possibility arises of non-stop, mechanical surveillance, which may not be for any purpose other than to collect information—the information’s usage would be determined later.⁸³ Such purpose-neutral surveillance would render considerations of purpose irrelevant; defendants could not be free from liability on the basis of a legitimate purpose where the ultimate use of the information was not yet determined.

Even where the observer shows a supposedly legitimate purpose for aerial surveillance, the purpose should not eliminate all liability, despite rulings in ground-level surveillance cases, such as *Plaxico* and *Saldana*. The arguments advanced in Part I, Section B, *supra*, support the basic case that any visual aerial surveillance of private residences is inherently offensive—just as wiretapping is offensive and unlawful, regardless of observer’s purpose or other contextual considerations. Even in non-commercial settings, such as private investigations of divorce or workers’ compensation claims, concerns about asymmetry of meta-information and the sanctity of the home (*supra*, Part I, Section B, Subsections 1, 3) make aerial surveillance likely to be highly offensive to a reasonable person.⁸⁴

In cases other than *Plaxico* and *Saldana*, the inquiry has also seemed dispositive. *See, e.g., Salazar v. Golden State Warriors*, 2000 WL 246586, at *4 (N.D.Cal. Feb. 29, 2000) (the plaintiff’s claim fails due to the legitimate work-related motive of the defendant, in investigating phone calls reporting the plaintiff’s alleged drug use).

⁸³ *See supra* note 42 and text accompanying note 42 (non-stop mechanical surveillance). *See also supra* note 43 (information as a commodity).

⁸⁴ Indeed, aerial surveillance is arguably more offensive than ground-level surveillance. In ground-level surveillance where asymmetry is normally more limited, disruptive surveillance at least alerts the subject of surveillance as to the possibility of the occurrence of surveillance, allowing the subject to take limited measures to guard privacy, such as by altering the activities occurring in the area being observed. (Similarly, a plaintiff’s right to legal remedies for hostile, open, and notorious trespass, would not mean that a defendant gains *carte blanche* for

Contextual considerations might rebut the presumption that visual aerial surveillance constitutes intrusion, but such a presumption would still be warranted. In extreme situations, such as those involving substantiated allegations of a plaintiff's criminal activity, under intrusion doctrine, a defendant could show that a reasonable person would not find the visual aerial surveillance highly offensive. Alternatively, a defendant could show that observations were kept to a minimum and that all data was guarded from indiscriminate dissemination. But the initial presumption of intrusion liability for visual aerial surveillance would be justified, since visual aerial surveillance itself should be considered to be highly offensive, absent special circumstances.

2. The Public Vantage Point Safe Harbor

Before concluding that visual aerial surveillance should presumptively constitute intrusion, it is important to consider a specific tenet of intrusion doctrine that has been vital to resolving claims arising from ground-level surveillance: the issue of the defendant's "vantage point." Intrusion has been applied to ground-level visual surveillance with only limited success. Surveillance has reached the level of intrusion only in extreme circumstances, in which defendants' conduct may well have constituted criminal activity.⁸⁵

surreptitious usage; surreptitious trespassers cannot be hostile, open, and notorious and thus cannot gain land rights through adverse possession. *See, e.g., Welch v. Unknown Heirs of Lipscomb*, 226 F.2d 776, 780 (D.C. Cir. 1955) (hostile, open, and notorious land use is required for adverse possession). By contrast, completely undisruptive and undetectable surveillance, such as that occurring from high-flying aircraft or from satellite, does not offer the property owner any clues as to the occurrence of the surveillance.

⁸⁵ *See supra* note 51 and text accompanying note 51 (citing *Tompkins* and *Souder*).

“Vantage point” considerations often provide the grounds for dismissing intrusion claims, where a defendant undertook ground-level surveillance of a private residence. In such instances, many intrusion claims are dismissed because the plaintiff’s activities were visible from a public vantage point—that is, the activities were observable (without the use of technological enhancement aids) from vantage points at which any observer has the right to be.⁸⁶

Yet a closer analysis of what may be termed the “public vantage point safe harbor”⁸⁷ reveals that very little if any visual aerial surveillance falls within the scope of the safe harbor—visual aerial surveillance cannot and should not be considered as occurring from a truly “public vantage point.”⁸⁸ Although tort common law rarely

⁸⁶ In various cases the fact that the plaintiff was visible from a public vantage point is a central reason for the dismissal of a claim. *See, e.g.*, *Deteresa v. American Broadcasting Companies, Inc.*, 121 F.3d 460, 466 (9th Cir. 1997); *I.C.U. Investigations, Inc. v. Jones*, 780 So.2d 685, 689–90 (Ala. 2000); *Johnson v. Corporate Special Services, Inc.*, 602 So.2d 385 (Ala. 1992); *Aisenson v. Am. Broadcasting Co.*, 269 Cal.Rptr. 379, 387–88 (Cal. Ct. App. 1990); *York v. General Elec. Co.*, 2001 WL 649807, at *3 (Ohio App. 12 Dist. June 11, 2001); *Swerdlick v. Koch*, 721 A.2d 849, 856–858 (R.I. 1998).

See also Morton, *Much Ado About Newsgathering*, 147 U. Pa. L. Rev. at 1444 (“Tort law, however, generally supports the proposition that an individual in public implicitly has consented to being photographed, and thus legal remedies extend little protection to acts of intrusive photography, videotaping, or surveillance of subjects located in, or in plain view from, a public place.”) (citation omitted).

⁸⁷ All uses of the phrase “public vantage point safe harbor” are set in quotations in this Note to distinguish that phrase as particular to this Note—the exact phrase, and variants on the phrase, have not been uniformly adopted in case law.

⁸⁸ It should also be noted that even where the “public vantage point safe harbor” applies—i.e., where surveillance is done from an indisputably “public vantage point”—the safe harbor does not necessarily completely free *all* surveillance from liability: Peeping Tom *criminal statutes* can apply to certain public vantage points. *Souder v. Pendleton Detectives, Inc.*, 88 So.2d 716, 718 (La. Ct. App. 1956) (“LSA-R.S. 14:284 defines a ‘Peeping Tom’ as ‘* * * one who peeps through windows or doors, or other like places, situated on or *about the premises* of another for the purpose of spying upon or invading the privacy of persons spied upon without the consent of the persons spied upon.’”) (emphasis added). The offender need not be on the victim’s property to be criminally liable. *Id.* In *Souder*, this criminal statute is the basis for denying the defendant’s motion to dismiss a privacy claim.

directly imports Fourth Amendment standards,⁸⁹ Fourth Amendment law provides strong persuasive authority that can be very useful in applying the “public vantage point safe harbor” to non-police visual aerial surveillance. Fourth Amendment law uses a “public vantage point safe harbor,”⁹⁰ examining police vantage points.⁹¹ Yet as Justice O’Connor’s *Florida v. Riley* concurrence points out, visual aerial surveillance raises a

⁸⁹ Fourth Amendment standards are not usually imported into privacy tort law—none of the cases in note 60, *supra*, import Fourth Amendment law. *But see* *Digirolamo v. D.P. Anderson & Assocs., Inc.*, 1999 WL 345592, at *3 (Mass.Super. May 26, 1999) (quoting *U.S. v. Taborda*, 635 F.2d 131, 139 (2d Cir.1980)) (Massachusetts trial court imports Second Circuit’s Fourth Amendment vantage point standard).

Though tort common law rarely adopts Fourth Amendment standards, legislation that applies to non-police parties, such as the Federal Wiretapping Act, has adopted Fourth Amendment standards. *See, e.g.*, Robert A. Pikowsky, *Privilege and Confidentiality of Attorney-Client Communication Via E-mail*, 51 *Baylor L. Rev.* 483, 542–43 (1999) (“The Federal Wiretap Act was enacted in response to the Supreme Court decisions in *Katz v. United States* and *Berger v. New York*, which set out the constitutional standards to be met for judicial approval of telephone wiretaps.”) (citations omitted).

Where a privacy tort statute’s language imports Fourth Amendment *language*, there has been direct criticism of the importing of such standards. *See* Andrew D. Morton, Comment, *Much Ado About Newsgathering: Personal Privacy, Law Enforcement, and the Law of Unintended Consequences for Anti-Paparazzi Legislation*, 147 *U. Pa. L. Rev.* 1435, 1437 (1999) (“This comment argues that by invoking the precise language of the Supreme Court’s Fourth Amendment ‘reasonable expectation of privacy’ test to trigger liability, the legislative responses [the 1998 California Statute and two proposed Congressional bills] to overaggressive newsgathering by the paparazzi inevitably will be limited in application, or, in the alternative, will restructure and narrow the scope of permissible law enforcement surveillance activity as defined by contemporary Fourth Amendment doctrine.”).

⁹⁰ *Riley*, 488 U.S. at 449 (quoting *California v. Ciraolo*, 476 U.S. 207, 213 (1986), for the “general proposition [that] the police may see what may be seen ‘from a public vantage point where [they have] a right to be’”); *see also* *Minn. v. Carter*, 119 S.Ct. 469, 480–81 (police observation through apartment building’s window on ground level was “from a public vantage point”) (Breyer, J., concurring).

⁹¹ Fourth Amendment law applies vantage point analysis through two doctrines, “open view” which applies to observations made by police officers from public places, and “plain view,” which applies to observations made by police during lawful warrantless entries into homes (e.g., finding contraband substances in the course of responding to a crime). “Open view” is the doctrine analogous to the intrusion tort law “public vantage point safe harbor.” *See* Seth Ruzi, Comment, *Reviving Trespass-Based Search Analysis Under the Open View Doctrine: Dow Chemical Co. v. United States*, 63 *N.Y.U. L. Rev.* 191, 205, 206 n.125, 206 n.127, 207 (1988).

distinct situation in which a “public vantage point safe harbor” cannot mechanically be applied.⁹²

In situations in which no telescopic aids are used, the use of airspace above private property for surveillance is not analogous to the use of public place adjacent to private property for ground-level surveillance. Accepting *arguendo* that aircraft are not enhancing devices, it would be problematic to apply “public vantage point” analysis to the sky; realistically, members of the public who use the air for transportation most likely are not able to undertake any surveillance.⁹³ The “public vantage point safe harbor,” when applied to ground-level surveillance, presupposes a situation that is symmetrical,

⁹² “Observations of curtilage from helicopters at very low altitudes are not perfectly analogous to ground-level observations from public roads or sidewalks.” *Riley*, 488 U.S. at 453 (O’Connor, J., concurring). See also *supra* note 32 (Justice O’Connor’s statement that it is feasible to build fences to prevent ground-level surveillance, but that it is impractical to prevent aerial surveillance).

Riley was decided on the grounds that the height of the helicopter, 400 feet, was commonly traveled by private aircraft—here, Justice O’Connor agreed with the plurality, though Justice O’Connor criticized the plurality for placing too much emphasis on the question of whether or not flight at 400 feet was simply *lawful*. *Id.* at 453 (O’Connor, J., concurring) (examining the prior case of *California v. Ciraolo*, 476 U.S. 207 (1986), Justice O’Connor states, “Ciraolo’s expectation of privacy was unreasonable not because the airplane was operating where it had a ‘right to be,’ but because public air travel at 1,000 feet is a sufficiently routine part of modern life that it is unreasonable for person on the ground to expect that their curtilage will not be observed at that altitude.”). See also Bradley W. Foster, *Warrantless Aerial Surveillance and the Right to Privacy: The Flight of the Fourth Amendment*, 56 J. Air L. & Com. 719, 749 (1991).

⁹³ “[A] flaw in the Court’s open view analysis is the assumption that any member of the public flying in legal airspace over Riley’s greenhouse could have seen what the police saw. . . . The Court does not acknowledge the qualitative difference that exists between an observation made by a passenger on a commercial airliner and a focused police inspection over an individual’s property. The mere fact that a private citizen is at a legal altitude says nothing about what that person could actually see from that height. The view from a commercial airliner that the public has of an area on the ground is usually fleeting and anonymous. The police, however, knew that the home and yard they were inspecting was Riley’s, and they knew they were looking for marijuana.” Dixon, *supra* note 45, at 172–73 (1989).

where the abilities of the observing party and the party being observed to view each other are equal.⁹⁴ That presupposition does not hold true in visual aerial surveillance.

To probe the “vantage point safe harbor” in more detail, two variations on the safe harbor must be examined. First, where no enhancing devices are used, what may be termed an “actual public vantage point safe harbor” is satisfied⁹⁵: any surveillance of the plaintiff was from a public vantage point, where the defendant had a general right to be for other purposes.⁹⁶ Alternatively, a second standard may be termed the “hypothetical public vantage point safe harbor.” This would free from liability a defendant who undertook surveillance that hypothetically could have taken place from a public vantage point, notwithstanding the defendant’s actual presence at a different, farther away public vantage point, from which the defendant used technological enhancing aids.⁹⁷

⁹⁴ The observer, by virtue of being at a public vantage point, is in view of the subject of surveillance.

⁹⁵ The “actual public vantage point safe harbor” could perhaps also be applicable where devices of very limited power, such as standard binoculars, are used. *See infra* note 105 (citing *Kyllo*’s “general public use” standard).

⁹⁶ *See, e.g.,* *Deteresa v. American Broadcasting Companies, Inc.*, 121 F.3d 460, 466 (9th Cir. 1997). In *Deteresa*, there was no evidence of enhancing technology having been used, *id.* at 462–63, 466 n.3. The Court stated its reason for denying an intrusion claim in terms consistent with the “actual public view” standard: “With no dispute that ABC videotaped Deteresa in public view *from a public place* . . . no intrusion into seclusion privacy claim lies as a matter of law.” *Id.* at 466 (emphasis added).

⁹⁷ The only known adoption of such a standard is the 1998 California Statute. *See supra* note 71 (Cal. Civ. Code § 1708.8(b) states, in part: “A person is liable for constructive invasion of privacy when the defendant attempts to capture . . . through the use of a visual or auditory enhancing device, regardless of whether there is a physical trespass, *if this image, sound recording, or other physical impression could not have been achieved without a trespass unless the visual or auditory enhancing device was used.*”) (emphasis added); under the 1998 California statute, if a given observation could hypothetically have been made without trespass and without the use of enhancing devices, then the observation may lawfully be made with enhancing devices and from any remote location.

If the argument that the sky is not a public vantage point for surveillance purposes is accepted, then the “hypothetical public vantage point safe harbor” could only apply where a piece

The first variation on the safe harbor, “actual public vantage point,” could apply to visual aerial surveillance only if an unduly narrow definition of enhancing devices were implemented. Even where no telescopic lens and no other similar telescopic equipment clearly constituting an enhancing device is used,⁹⁸ the “actual public vantage point” standard can only be satisfied if the aircraft or satellites used for surveillance are not themselves considered to constitute enhancing devices. Yet scholarly analysis⁹⁹ and

of land is not enclosed by fences—the lack of fences could mean that certain aerial observations could hypothetically have been made without trespass from ground-level vantage points.

Language from *E. I. duPont de Nemours & Co. v. Christopher*, 431 F.2d 1012, 1016 (5th Cir. 1970), *supra* note 11, may suggest that the lack of actual fences should not free a defendant from liability:

Perhaps ordinary fences and roofs must be built to shut out incursive eyes, but we need not require the discoverer of a trade secret to guard against the unanticipated, the undetectable, or the unpreventable methods of espionage now available.

In the instant case duPont was in the midst of constructing a plant. Although after construction the finished plant would have protected much of the process from view, during the period of construction the trade secret was exposed to view from the air.

⁹⁸ See *supra* note 95 (ordinary binoculars may not qualify as technological enhancing devices).

⁹⁹ Power, *supra* note 21, at 20, 24 (1989), states that aircraft should be considered to constitute sense-enhancing equipment. Power states:

the Supreme Court simply failed to recognize that airplanes and helicopters are technological aids to surveillance not unlike wiretapping equipment. If there is a coherent approach to analyzing technologically-enhanced government observations, one can discover it only after re-examining the premises of *Katz* in light of the broader concept of the visual search.

Id. at 20 (citation omitted).

One problem with an interpretation of airplanes as enhancing devices is that automobiles then too would be considered sense-enhancing devices, when used by people who travel for the purpose of viewing something hundreds of miles away. Yet such an interpretation of automobiles as being sense-enhancing devices, when used to allow surveillance, has been implicitly espoused. See *id.* at 93 (“enhancement by vantage point, [is] a form of mechanical assistance.”).

Proposed Federal legislation provides a definition suggesting that airplanes might not be enhancing devices, but the definition is merely illustrative. Personal Privacy Protection Act, S.2103 § 2(a)(2) (“modern visual or auditory enhancement devices, *such as* powerful telephoto lenses and hyperbolic microphones that enable invasion of private areas that would otherwise be impossible without trespassing.”) (emphasis added).

language from *E. I. duPont*¹⁰⁰ suggest that aircraft and satellites, themselves, should be regarded as enhancing devices.

If aircraft and satellites are regarded as enhancing devices, then, for a “vantage point safe harbor” to apply, courts must accept the novel “hypothetical public vantage point safe harbor,” and, also, the material observed must have been observable from a ground-level location without an enhancing device¹⁰¹—e.g., if the site observed were close to a road and not enclosed by a fence. Declining to make the assumption that an aircraft is not an enhancing device—such an assumption would allow application of “actual public vantage point” analysis—and declining to engage in any “hypothetical public vantage point” analysis, the *E. I. duPont* court simply suggests that what is in

¹⁰⁰ *E. I. duPont*, *supra* note 11, may be interpreted as viewing aircraft as sense-enhancing devices: “Commercial privacy must be protected from espionage which could not have been reasonably anticipated or prevented. We do not mean to imply, however, that everything not in plain view is within the protected vale, *nor that all information obtained through every extra optical extension is forbidden.*” 431 F.2d at 1016 (emphasis added).

The language’s implication would be that in the *E. I. duPont* case, an “optical extension” (i.e., a technological enhancing device) was used—the case mentions no use of telescopic lenses or even binoculars, meaning that the only such “optical extension” would be the plane itself. The language’s implication is that while the plane constituted an enhancing device in the case, the Fifth Circuit chooses not to formulate a rule that covers all “optical extension[s]” (enhancing devices); rather the holding that trade secrets cannot lawfully be intercepted through the use of an “optical extension” only applies to certain fact situations.

¹⁰¹ The “actual public vantage point safe harbor” cannot free from liability observations from a place where the observer has a right to be for other purposes, *when the observer used enhancing devices*. Such a proposition would be counter to basic protections offered by privacy law—such as the right to privacy in a home.

Allowing the “actual public vantage point safe harbor” to apply where powerful enhancing devices are used defeats the purpose of the safe harbor. E.g., if a plaintiff’s home is the sole building in the center of a large unfenced-in piece of property, and if from an adjacent street a defendant uses powerful telescopic lenses to view a plaintiff in that home, clearly the rationale for a safe harbor is defeated; in this hypothetical, the plaintiff was not visible to a person situated outside of the plaintiff’s property—rather, the defendant used technological aids to view the plaintiff at a level of detail that would have been possible only for a trespasser, in the absence of the use of powerful technological aids.

“plain view” does not include areas that can be observed only from above.¹⁰² The lack of fences in *E. I. duPont* means that the surveillance might potentially have qualified for a “hypothetical public vantage point” safe harbor; but, notably, the court declined to even pose the question of whether the observations could have been made at ground level.¹⁰³

The “hypothetical vantage point safe harbor” variation is not adopted in Fourth Amendment law. The flaws in a “hypothetical vantage point safe harbor” are articulated in *Kyllo v. U.S.*, in which the Supreme Court holds that police are not free from the Fourth Amendment warrant requirement when they use thermal imaging technology to uncover information that hypothetically could have been seen from a street location.¹⁰⁴ Eschewing a “public vantage point” standard, *Kyllo* implemented a standard centering on

¹⁰² The court explained its holding: “Commercial privacy must be protected from espionage which could not have been reasonably anticipated or prevented. We do not mean to imply, however, that everything not in *plain view* is within the protected vale, nor that all information obtained through every extra optical extension is forbidden.” 431 F.2d at 1016 (emphasis added). By clarifying that its ruling does not apply to “everything not in plain view,” the Fifth Circuit suggested that the case involved something not in “plain view.”

E. I. duPont, *supra* note 11, involved standard visual aerial surveillance: “The area photographed by the Christophers was the plant designed to produce methanol by this secret process, and because the plant was still under construction parts of the process were exposed to view from directly above the construction area.” *Id.* at 1013.

¹⁰³ The Fifth Circuit perhaps suggests that a “hypothetical vantage point safe harbor” would be undesirable, even where observations made from the air could have been made from ground-level, *see supra* note 97 (actual fences are not needed for plaintiffs to have a trade secret claim when defendants conducted visual aerial surveillance).

¹⁰⁴ *Kyllo v. U.S.*, 121 S.Ct. 2038, 2043 & n.2 (2001) (“The dissent’s comparison of the thermal imaging to various circumstances in which outside observers might be able to perceive, without technology, the heat of the home—for example, by observing snowmelt on the roof, *post*, at 2048—is quite irrelevant. The fact that equivalent information could sometimes be obtained by other means does not make lawful the use of means that violate the Fourth Amendment. The police might for example learn how many people are in a particular house by setting up year-round surveillance; but that does not make breaking and entering to find out the same information lawful.”).

an examination of the level of technology used in police surveillance¹⁰⁵ where observations of the interior of homes are made.¹⁰⁶ Likewise, the implication from Supreme Court dicta on satellites—suggesting that police satellite surveillance would constitute a search—is that there would be no “hypothetical vantage point safe harbor.”¹⁰⁷

In sum, no aspects of current intrusion doctrine would free visual aerial surveillance of private residences from presumptive liability. The “public vantage point safe harbor” could not readily be applied to free visual aerial surveillance from presumptive liability, and contextual considerations would not alter the larger problem of an offensive asymmetry of information that violates certain basic interests.

C. The General Weakness of Intrusion Law

The obstacle that would prevent courts from a finding of liability is not any aspect of properly understood intrusion doctrine but, rather, the more general weakness of intrusion law. Though intrusion law generally offers the best available remedy to aerial

¹⁰⁵ *Id.* at 2043 (“We think 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,’ *Silverman*, 365 U.S., at 512, 81 S.Ct. 679, constitutes a search—at least where (as here) *the technology in question is not in general public use.*”) (emphasis added).

¹⁰⁶ *See supra* note 105 (police observations of the interior of a home constitute a Fourth Amendment search, where observations were made with technology that is not in “general public use,” regardless of whether or not the same observations could hypothetically have been made from a public vantage point and without enhancing devices).

¹⁰⁷ The Supreme Court, in dicta suggesting that police satellite surveillance would constitute a search, does not make any suggestion that satellite surveillance would not be a search if what was observed hypothetically could have been seen from a public vantage point, without the use of technological aids. *Kyllo*, 121 S.Ct. at 2044; *Dow Chemical*, 476 U.S. at 238, 250.

surveillance, intrusion is itself a troubled doctrine with limited effectiveness.¹⁰⁸ Part of the reason for the lack of success of most intrusion claims may be that, like the other privacy torts, intrusion law is relatively new¹⁰⁹—perhaps the doctrine has yet to gain nuance and legitimacy due to its relatively recent emergence. There are also other problems with the doctrine; a cause of action for “intrusion upon seclusion”—where the invasive activity is allegedly “highly offensive to a reasonable person”¹¹⁰—seems so amorphous as to be generally impracticable.¹¹¹ While extreme cases of obvious physical interference with a person’s activities may create liability,¹¹² the intrusion doctrine is too vague to provide clear outcomes for more subtle interests, such as those interests threatened by aerial surveillance. Finally, intrusion law may not yet have adapted sufficiently to innovations in surveillance technology.¹¹³

¹⁰⁸ Lyrissa Barnett Lidsky, *Prying, Spying, and Lying: Intrusive Newsgathering and What the Law Should Do About It*, 73 Tul. L. Rev. 173, 207 (1998) (intrusion’s flaws as a doctrine mean that an especially high percentage of intrusion claims fail).

¹⁰⁹ See Note, Privacy, Technology, and the California “Anti-Paparazzi” Statute, *supra* note 48, at 1382.

¹¹⁰ See *supra* note 57.

¹¹¹ “Taken together, the doctrinal flaws in the intrusion tort undermine a plaintiff’s ability to recover for privacy invasions by the media. Equally important, these doctrinal flaws create a great deal of uncertainty about the scope of the tort’s coverage. . . . [T]he strength of the intrusion tort—that it is broad enough to cover the various types of conduct—may also be its greatest failure.” Lidsky, *supra* note 108, at 212.

The flaws of intrusion include that “intrusion is so vague, it lends itself to what one might call ‘kitchen sink’ pleading.” *Id.* at 208. “[T]he amorphous nature of the right protected by the intrusion tort” makes courts “uncomfortable or even hostile” to intrusion claims. *Id.* at 211.

¹¹² See *supra* note 51 (citing *Tompkins* and *Souder*).

¹¹³ “A . . . doctrinal flaw in the intrusion tort stems from the law’s failure to keep pace with the development of surveillance technology.” Lidsky, *supra* note 108, at 212.

Analysis of visual aerial surveillance under intrusion doctrine, in Part II, Section B, *supra*, serves two purposes. First, the analysis attempts to show that there is a strong basis for presuming any visual aerial surveillance to constitute intrusion in the common law of many states. Acknowledging the flaws of intrusion, as a practical matter, the analysis seeking to demonstrate that visual aerial surveillance presumptively would be intrusion still serves a second purpose: demonstrating such a conclusion provides justification for widespread legislation to create liability for visual aerial surveillance.¹¹⁴

III. A Proposal for Legislation

Given the existing troubles with intrusion doctrine, a legislative solution is preferable—legislation provides greater clarity and has the advantage of possibly being limited to prospective application. In proposing a legislative solution for the problem of visual aerial surveillance, wiretap law provides a useful guide. Various potential problems confront proposed legislation—evidentiary issues, as well as ramifications for media and for government. Yet the very same concerns confront the Federal Wiretapping Act, a statute that is not defeated by such problems.

A. The Proposed Standard

The proposed standard should come in the form of state or federal legislation similar to the Federal Wiretapping Act. The legislation would set out in detail a

¹¹⁴ See *infra* Part III, Section A (proposing legislation).

presumption of liability for any visual aerial surveillance—the proposed standard would also explain under what circumstances the presumption may be rebutted. Legislation could be drafted prospectively, so as to avoid imposing presumptive liability for past aerial surveillance. The legislation would create penalties for the failure to control or destroy information collected through past aerial surveillance.

In substance, the legislation should respond to the concerns set out in Part I, Section B, *supra*, creating a presumption of liability for visual aerial surveillance.¹¹⁵ Per Part I, Section B, Subsection 2, *supra*, use of data from visual aerial surveillance to obtain commercial advantages, such as traffic in information or direct use of information for market research purposes, should create especially large liability that would include disgorgement of profits and also additional damages. For non-commercial uses of information obtained through visual aerial surveillance, such as for use in sociological studies or in workers' compensation or divorce disputes, the amount of damages would be more difficult to determine—but there should still be ample liability.

This Note proposes to create liability for those undertaking surveillance where the apparent purpose is not to garner information regarding people—e.g., mapmaking or geological or topographical surveys¹¹⁶—only where the observer has constructive knowledge that he or she is preserving, for a significant period of time, records containing close observations of people. Where the observer has constructive knowledge

¹¹⁵ This Note proposes only civil liability.

¹¹⁶ Currently, there are forms of visual aerial surveillance that apparently are not used to gather close observations of people but, rather, garner observations regarding land or the environment. *See, e.g.*, Koplou, *supra* note 16, at 481 (1991) (“already, analysts have suggested that Open Skies imagery and other data can profitably assist . . . environmental assessment (by measuring pollution levels, deforestation, erosion, etc.) and mapping.”).

that such records are being preserved, there would be liability for gathering of information, even where the information had not yet been used.

The initial burden of showing that visual aerial surveillance occurred would rest with plaintiffs. In cases involving observation for mapmaking, or geological or topological surveys, plaintiffs likely would not meet the initial burden of showing that visual aerial surveillance occurred, due to the definition of “surveillance.”¹¹⁷

The presumption of liability could be rebutted in extreme circumstances. The presumption would only be rebutted where a defendant could affirmatively demonstrate that limits on surveillance and precautions regarding dissemination of information were implemented, and that such measures made the risk to security and dignity posed by the surveillance negligible. No attention would be paid to the purpose or other alleged significance of surveillance, unless well-founded suspicions existed that the subject of surveillance posed an immediate threat to the physical security of other people; immediacy would be a requirement because in its absence, citizens could inform the police of suspicions.

B. Evidentiary Issues

Remedies become complicated, since a plaintiff—even after becoming aware of the existence of some surveillance—may lack full knowledge of the complete extent of the surveillance, leading to evidentiary problems. One reason for the lack of current

¹¹⁷ See Garner, *supra* note 14 (definition of “surveillance”).

litigation and legislation on the issue of aerial surveillance may indeed be that people do not know how much they have been observed.¹¹⁸

Yet evidentiary problems can be alleviated to a considerable degree. One purpose of legislation on the topic of surreptitious surveillance would be to stimulate the development of counter-surveillance technology that would allow people to know when they are being unlawfully watched. Additionally, there are legal tools available for cases in which a plaintiff is at an informational disadvantage. Proof burdens¹¹⁹ can be established such that once a plaintiff shows the existence of some surveillance, the burden shifts to the defendant to show that a law was not violated. In essence, proof burdens can be established such that a little evidence from a plaintiff goes a long way. Other areas of law respond to informational disadvantages not by simply abandoning efforts to provide plaintiffs with relief, but rather by attempting to craft some solution to plaintiffs' disadvantages.¹²⁰ To be an effective deterrent against visual aerial surveillance, legislation need not catch every violator; rather, severe damages for those discovered can provide ample deterrence.

Legislation could alleviate certain evidentiary difficulties by merely streamlining aspects of intrusion law. A defendant's purpose in undertaking surveillance may be

¹¹⁸ Helicopters may have flown by adjacent areas but not directly overhead the property being observed, thus minimizing the disruption; satellites and other non-disruptive means may have been used, without the observed ever knowing.

¹¹⁹ See, e.g., *Florida v. Riley*, 488 U.S.445, 465 (Brennan, J., dissenting) (suggesting that State should have burden of proof to demonstrate that non-police flights at an altitude of 400 feet are commonplace).

¹²⁰ E.g., *res ipsa loquitur* is a response to information asymmetry regarding evidence. Jeffrey W. Puryear, Case Notes, *Schmidt v. Gibbs: The Application of Res Ipsa Loquitur to Arkansas Medical Malpractice Litigation*, 46 Ark. L. Rev. 397, 424 (1993) ("A plaintiff needs an effective tool for recovery when others control the environment in which the injury occurs . . .").

easily disguised by the selective revelation of only a narrow cross-section of all recorded information; the rest of the records could be destroyed by the defendant. But by focusing on objectively observable aspects of the surveillance—wiretap law focuses on such factors—legislation can avoid reliance on determinations of the defendant’s purposes.

Even if plaintiffs would rarely possess sufficient information to generate significant damages against those undertaking visual aerial surveillance, there is still value in legislation that creates a cause of action. Even if a cause of action prohibiting the gathering of certain information is rarely enforceable, still the existence of that cause of action likely renders the illegally obtained information inadmissible in criminal proceedings.¹²¹

C. Effects on the Media and Press

The proposed legislation would not violate the First Amendment. It is not clear that legislation that seems to have the effect of disfavoring newsgathering parties—arguably, the 1998 California Statute exemplifies such legislation—is Constitutional.¹²²

¹²¹ In *Com. v. Loudon*, 536 Pa. 180, 638 A.2d 953 (Pa. 1994), and in *Malpas v. State*, 116 Md.App. 69, 695 A.2d 588 (Md. Ct. Spec. App. 1997), courts rule on the admissibility of evidence obtained through surveillance—if evidence had been obtained through unlawful means, then the evidence would be inadmissible in criminal proceedings.

¹²² See David A. Browde, Note, *Warning: Wearing Eyeglasses May Subject You to Additional Liability and other Foibles of Post-Diana Newsgathering—an Analysis of California’s Civil Code Section 1708.8*, 10 Fordham I. P., Media & Ent. L.J. 697, 699 (2000) (“This note analyzes the multiple infirmities that render section 1708.8 unconstitutional, including singling out the professional news media for discriminatory treatment, overbreadth, vagueness, and its confusion of Fourth and First Amendment standards.”); see also *id.* at 699 n.7 (stating that as of 2000, there had been no rulings on the constitutionality of the statute).

But see Ashley C. Null, Note, *Anti-Paparazzi Laws: Comparison of Proposed Federal Legislation and the California Law*, 22 Hastings Comm. & Ent. L. J. 547, 558–64 (2000).

But the legislation proposed here does not disfavor in any way members of the media or press. The proposed legislation simply sets boundaries on the permissible means of information-gathering, in much the same manner that trespass law and wiretap law set boundaries on information-gathering.

Legislation creating liability for visual aerial surveillance would have implications regarding media and press activity. Acts done in the process of newsgathering does not in itself confer unlimited immunity from criminal and tort law.¹²³ Information produced by illegal wiretapping can generally be published or broadcast by other parties, without liability;¹²⁴ but strong disincentives to produce such information in the first place can limit the amount of information that is ever compiled.

While legislation would not exempt from liability media or press defendants observing public figures, it is quite possible that in practice, these defendants might, more often than other defendants, be able to rebut a presumption of wrongful conduct. Intrusion doctrine provides more limited protection to public figures.¹²⁵ The problem of asymmetry of “meta-information” seems less prevalent in media and press activity. Media surveillance is done for the very purpose of disclosure to the public, meaning that public figures observed may be able to discover a certain amount of information

¹²³ See, e.g., *Wolfson v. Lewis*, 924 F. Supp. 1413, 1417 (E.D.Pa. 1996).

¹²⁴ *Bartnicki v. Vopper*, 532 U.S. 514 (2001).

¹²⁵ In *Aisenson v. American Broadcasting Co.*, 269 Cal. Rptr. 379, 381–82 (Ct. App. 1990), appellant was a judge who, in addition to being portrayed negatively by commentary, was videotaped walking from his home to his car for use in a news segment. Summary judgment was affirmed on an intrusion claim, on the grounds that appellant was a public figure, whose life is of legitimate public interest and that he was filmed while “in full public view.” *Id.* at 388. (Since an enhanced lens was used, *id.*, the case potentially would be decided differently today under Cal. Civ. Code § 1708.8(b)).

regarding the identities of those undertaking the surveillance and regarding how the information is stored and used. Furthermore, other legal protections, such as FAA discretionary restrictions on flights¹²⁶ and privacy tort liability for misuse of information,¹²⁷ may make additional protection for public figures less essential.

D. Effects on Government

Proper interpretation of current Fourth Amendment doctrine would force police searches to abide by the proposed limits placed on non-police aerial surveillance; such an outcome is not inherently problematic.¹²⁸ All three opinions in the Supreme Court's decision in *Florida v. Riley*¹²⁹ conclude that whether police airplane or helicopter surveillance constitutes a search depends, at least in part, on how common air travel is at a given height.¹³⁰ The Fourth Amendment test of how common a societal practice is—a

¹²⁶ FAA elements have been delegated authority to issue a temporary flight restrictions NOTAM (notice to airmen) to protect the President, Vice President, or “other public figures.” 14 CFR § 91.141.

¹²⁷ See *supra* notes 54–56, 59.

¹²⁸ Fourth Amendment law would not be binding on non-police surveillance. See *supra* notes 20, 21 and text accompanying notes 20, 21.

¹²⁹ 488 U.S. 445 (holding, 5–4, that police, from a helicopter at 400 feet, looking without the use of mechanical devices into a greenhouse, through openings in its roof and sides, had not conducted a search requiring a warrant for Fourth Amendment purposes).

¹³⁰ *Riley*, 488 U.S. at 451; *id.* at 453 (O’Connor, J., concurring) (the dispositive question is whether air travel is common at a given height); *id.* at 460 (Brennan, J., dissenting) (“The question before us must be not whether the police were where they had a right to be, but whether public observation of Riley’s curtilage was so commonplace that Riley’s expectation of privacy in his backyard could not be considered reasonable.”); see also *id.* at 465 (“What separates me from JUSTICE O’CONNOR is essentially an empirical matter concerning the extent of public use of the airspace at that altitude, together with the question of how to resolve that issue.”).

test that has been used for decades¹³¹ and has recently been reaffirmed¹³²—plays a vital role in the analysis of the larger question of whether the primary Fourth Amendment standard of “reasonable expectations of privacy”¹³³ is satisfied.

The guiding Fourth Amendment standard of “reasonable expectations of privacy” should demand that before reaching the determination of whether a surveillance practice is common enough to negate such reasonable expectations, a court must first determine that the surveillance practice is lawful. In determining whether an individual has a reasonable expectation of privacy with respect to a certain kind of surveillance, the question should be not whether it is lawful (or common) to be in the place from which the surveillance was conducted,¹³⁴ but whether it is lawful to conduct surveillance from that place. Police aerial surveillance could not be presumed lawful if the proposed legislation—prohibiting non-police aerial surveillance—were adopted; such legislation would create a “reasonable expectation of privacy” from overhead surveillance.

¹³¹ See Power, *supra* note 21, at 113 n.108.

¹³² See *Kyllo*, *supra* note 105.

¹³³ See, e.g., *California v. Ciraolo*, 476 U.S. 207, 211 (1986):

The touchstone of Fourth Amendment analysis is whether a person has a “constitutionally protected reasonable expectation of privacy.” *Katz v. United States*, 389 U.S. 347, 360 (1967) (Harlan, J., concurring). *Katz* posits a two-part inquiry: first, has the individual manifested a subjective expectation of privacy in the object of the challenged search? Second, is society willing to recognize that expectation as reasonable? See *Smith v. Maryland*, 442 U.S. 735, 740 (1979).

¹³⁴ See *supra* note 92 (Justice O’Connor criticized the *Riley* plurality’s focus on whether the police helicopter undertaking surveillance could lawfully fly at an altitude of 400 feet; instead focusing on the commonality of doing so and people’s reasonable expectations of privacy).

Holding police to the same surveillance standards as private citizens poses no great problem.¹³⁵ Police can obtain warrants where there is cause. To the extent that police are more meticulous and careful in gathering only the minimum amount of information needed and in guarding that information, police could rebut the presumption that visual aerial surveillance violated the terms of the proposed legislation.

Making aerial surveillance generally a tort would not handcuff police on vital matters of national security. On such matters, the government and police are granted special powers by the Foreign Intelligence Surveillance Act of 1978.¹³⁶ The powers granted under this statute are broad,¹³⁷ and this Note does not propose to limit these powers in any way. Nothing in this Note's proposal would limit the U.S. government's rights to conduct military surveillance of other countries.¹³⁸

¹³⁵ In fact, the obligation of police to respect citizens' privacy is at times higher than the obligation of citizens to respect one another's privacy. Law enforcement officials have at times been liable for damages for the violation of certain privacy-related standards that do not apply to private citizens. *See, e.g.,* *Bivens v. Six Unknown Named Agents of Fed. Bureau of Narcotics*, 403 U.S. 388 (1971) (holding federal officers liable for money damages, for violation of citizen's Fourth Amendment right not to have house searched by the state without warrant; the officers were also sued for invasion of privacy, under state tort law).

¹³⁶ Foreign Intelligence Surveillance Act of 1978 (FISA), Pub. L. No. 95-511, tit. I, § 101, 92 Stat. 1783 (1983) (codified at 50 U.S.C. §§ 1801–1811 (1996)).

¹³⁷ *See* James X. Dempsey, *Communications Privacy in the Digital Age: Revitalizing the Federal Wiretap Laws to Enhance Privacy*, 8 Alb. L.J. Sci. & Tech. 65, 72–73 (1997) (discussing requirements for surveillance under FISA).

¹³⁸ The Cuban Missile Crisis started when visual aerial surveillance of Cuba revealed a threat to the U.S.; Cuban protests regarding the impropriety of such surveillance belied the actual danger. *See, e.g.,* R. Garthoff, *Reflections on the Cuban Missile Crisis* 22 (1987) (“On October 15, the very day after the crucial U-2 reconnaissance mission, *Pravda* reported from Havana protests of U.S. overflights of Cuba.”).

Conclusion

Legislation should make visual aerial surveillance presumptively a tort, thereby codifying the conclusion that the overwhelming majority of visual aerial surveillances would constitute tortious intrusion if courts properly applied the intrusion doctrine. The very engine driving *Causby*'s abandonment of *ad coelum*—the need for the law to keep pace with technological innovation¹³⁹—suggests a restoration of privacy rights that are related to the *ad coelum* bundle. Though landowners no longer own all property extending upwards to the heavens, private residences should still be protected against surveillance conducted from aircraft and satellites.

The *Causby* Court's reluctance to delve into the possibilities of future use of the sky for non-transportation purposes may be explained as part of certain courts' more general leeringness of discussions of scientific and technological issues.¹⁴⁰ But in the face of current innovation, with the growth of the Internet and advancement in genetic research, the legal system's reluctance to address scientific and technological issues may well result in an ad hoc erosion of basic privacy values.¹⁴¹ The mechanical application of

¹³⁹ See *Causby*, *supra* note 8. The need to adapt the law to changing technology has continually been recognized. See, e.g., *Silverman v. U.S.*, 365 U.S. 505, 508–09 (1961) (describing parabolic microphones and other new technological devices as “frightening paraphernalia which the vaunted marvels of an electronic age may visit upon human society.”).

¹⁴⁰ Power, *supra* note 21, at 113 n.78 (“Courts rarely discuss scientific principles in fourth amendment cases. Justice Harlan did note in his *Katz* concurrence that the failure to treat wiretapping as a search was ‘bad physics as well as bad law.’ *Katz*, 389 U.S. at 362 (Harlan, J., concurring).”).

¹⁴¹ See generally Gregg M. Fishbein & Susan E. Ellingstad, *Internet Privacy: Does the Use of “Cookies” Give Rise to a Private Cause of Action For Invasion of Privacy in Minnesota?*, 27 Wm. Mitchell L. Rev. 1609 (2001); Shawn C. Helms, *Translating Privacy Values with Technology*, 7 B.U. J. Sci. & Tech. L. 288 (2001); June Mary Z. Makdisi, *Genetic Privacy: New Intrusion A New Tort?*, 34 Creighton L. Rev. 965 (2001).

existing legal doctrines to emerging technological devices is not a desirable solution.¹⁴²

Yet by systematically confronting problems arising from new technologies, the legal system can build an integrated framework that makes it easier to tackle other new problems as they emerge.¹⁴³

Where judicial standards are vague—such as the *Causby* Court’s departure from *ad coelum*, in which many questions were left unanswered—legislation may offer an optimal solution. Admittedly, public fervor has yet to cause great political pressure for limitations on aerial surveillance. The public may be simply unaware of the technology that currently makes aerial surveillance a threat to basic values;¹⁴⁴ the public may not know that, in the post-*ad-coelum* era, air rights are limited and that other common law remedies, such as intrusion, are highly imperfect. The lack of public outcry should not hinder legislative efforts; not every piece of legislation need be the product of enormous public pressure—especially where, as here, the interests being protected are largely those of the public itself.

¹⁴² Prior to the Supreme Court’s *Kyllo* ruling, one commentator observed the general importance of adapting legal principles to new technologies: “This Note contends that any extension by analogy of earlier Supreme Court cases dealing with technology and the Fourth Amendment to a case involving a thermal imager signifies a failure to comprehend, and a lack of willingness to investigate, the unique characteristics and nature of a thermal imager.” Robert K. Glinski, Note, *Constitutional Law—Thermal Imagery and the Fourth Amendment: Do I Look Warm to You?—United States v. Ford*, 34 *F.3d* 992 (1994), 14 *Temp. Envtl. L. & Tech. J.* 293, 295 (1995).

See also supra note 92 (Justice O’Connor, concurrence in *Riley*, stating that the public vantage point safe harbor should not be mechanically applied to aerial surveillance).

¹⁴³ Significantly, one commentator finds it valuable to compare visual surveillance privacy concerns with Cyberspace data privacy concerns. Julie E. Cohen, *Examined Lives: Informational Privacy and the Subject as Object*, 52 *Stan. L. Rev.* 1373, 1425 (2000) (“The benefits of informational privacy are related to, but distinct from, those afforded by seclusion from visual monitoring. It is well-recognized that respite from visual scrutiny affords individuals an important measure of psychological repose.”).

¹⁴⁴ Examples of public exposure to aerial surveillance—e.g., *supra* note 13 (Michael J. Fox testimony before Congress)—are relatively rare.

Technology may make it easier for private individuals to police one another through advancement in surveillance devices, but technology will not police itself. Rather, basic privacy values may become compromised in the absence of legal remedies to aerial surveillance. Though it may be removed from most people's daily concerns, the practice of aerial surveillance should be watched with a keen eye by the law.