

Privacy in a Time of Drones

BY RONALD M. SANDGRUND



This article discusses potential invasion of privacy and other tort liabilities arising from drone and other unmanned aerial vehicle activities.

Big Brother has been a concern since Orwell's *1984*, but today it's Big Business and the 12-year-old kid next door flying a drone who may pose an equal threat to our privacy.

Drones afford many benefits, some quite extraordinary, including assisting with aerial mapping, education, real estate and cropland management, urban planning, power line and pipeline inspection, wildfire management, disaster response administration, emergency medicine deliveries, telecommunications, movie filming, journalism, doorstep package delivery, refinery monitoring, and recreational fun.¹ They also present some potential societal detriments, serving as accomplices in drug smuggling, terrorism, assassination, and voyeurism.² Even their lawful use comes with some invasion of privacy risks.³

This article focuses on the risks drones present to our solitude and sanctuaries; potential tort liability arising from drone use; remedies for non-governmental invasions of our privacy, person, and place; and practical considerations that might guide lawyers who work in this novel and evolving field. The article briefly describes the history of federal and state drone regulation and preemption issues; discusses the intersection of Colorado privacy, trespass, and nuisance laws and drone activities; and examines the lingering legal uncertainties accompanying drone technology advances.

Tort liability for physical injury to property or bodily injury to persons is beyond this article's scope. Similarly, the article does not discuss Fourth Amendment warrant, search, and privacy concerns relating to government drone deployment.⁴

Drones Today (and Tomorrow)

Drones are improving technologically at the speed of smartphones, not airplanes. In fact, by the time you read this article, drone technology will have advanced significantly since this piece was conceived during the 2020 pandemic summer.

Today's drones serve as platforms for "intelligent sensor suites, high-definition gigapixel cameras, live-streaming media, global positioning systems, facial recognition and biometric programs."⁵ Some drone features are only readily accessible to governmental actors, such as the military, law enforcement, and their contractors, due to the feature's cost and technical complexity. Facial recognition has already been integrated into many security camera systems. While drones incorporate a Global Positioning System (GPS) as part of their autopilot mechanisms, their GPS serves the same purposes as that found in cell phones, although most drone GPS systems are more accurate.

Drone laws will change as drones and their satellite technologies change. Reality will steer these changes as drones become as ubiquitous as cell phones.⁶ In April 2021, an estimated 872,000 drones were in use in the United States, about 43% commercially and 57% recreationally, with over 222,000 Federal Aviation Administration (FAA) certified remote pilots.⁷ One commentator urges that "there is no other technology that is as accessible to the general public and poses as tangible a threat to privacy and safety as the drone."⁸ Others would argue that this is a gross overstatement and that smartphones and other personal electronic devices, which are widely used and generally not feared, pose a much graver privacy threat.

Still, drones the size of insects—micro-aerial vehicles (MAVs)—outfitted with cameras and microphones are already in use, and not just in *James Bond* films,⁹ although their use is typically limited to the military due to their cost and complexity. Before long we may miss some drones' bothersome whirring, which alerts us to the drones' presence and that we might be filmed or recorded. Flying micro-drones may make noise indistinguishable from flying insects or make no perceptible sound at all.

Overview of Drone Regulation

Federal, state, and local laws regulate drones and other unmanned aerial vehicles (UAV) and unmanned aircraft systems (UAS).¹⁰ These regulations are likely to evolve, not only in response to drone-related technological progress, but also with experience, as drones become a part of the fabric of our lives.

Federal Law and Regulations

In the mid-20th century, the US Supreme Court held that for property owners to fully enjoy their land, they "must have exclusive control of the immediate reaches of the enveloping atmosphere" and "own[] at least as much of the space above the ground as [they] can occupy or use in connection with the land."¹¹ The Court left open the parameters of these "immediate reaches." Drone technology has brought this issue to the fore.

In 2016, the FAA finalized its initial drone regulations, including what is commonly referred to as Part 107.¹² On October 5, 2018, President Trump signed the FAA Reauthorization Act of 2018 (the Act).¹³ Building on the 2016 regulations, the Act primarily addresses recreational and commercial use of UAVs, including pilot training and FAA remote pilot certification (and waiver of the same); airspace authorization;¹⁴ UAV registration; maximum and minimum height, weight, clearance, speed, and line of sight requirements; limits on operating over other persons; risk-based consensus safety-standards; and airport safety and air-space hazard mitigation, among other topics.¹⁵ The FAA declined to expand its jurisdiction over safety to encompass privacy issues, deferring to existing state law and other privacy protections.¹⁶ The Act is a work

in progress, as industry stakeholders, interest groups, and the federal government lobby to shape this law through consensus regulation, drawing on everyday testing and experience.

In January 2021, the FAA released for publication its final remote identification (Remote ID) regulations.¹⁷ Remote ID will provide information about drones in flight, such as the drone's unique identity, location, altitude, and control station or take-off location. Authorized public safety organization employees can request the identity of a drone's owner from the FAA. These features may help provide answers to questions like, "Where is that annoying buzzing coming from?"¹⁸ While the ordinary person might view this rule as offering pushback to a drone led invasion of their privacy, drone operators see it as an invasion of *their* privacy. Thus, it is expected that any FAA regulations will generally focus on safety, not privacy.¹⁹

Congress has indicated a desire for close cooperation between federal and state authorities over drone regulation. The federal government wants local resources to help enforce federal drone laws. The needs of interstate commerce, and preferences of the Amazon.coms of the world, will influence and shape not only federal law, but also any working partnership between and among state and federal governments. Therefore, tort liability protections are likely to arise.

The Colorado Regulatory Scheme

Colorado presently has no statutes specifically regulating drone activity, although one regulation makes it unlawful to use drones "to look for, scout, or detect wildlife as an aid in the hunting or taking of wildlife."²⁰ Colorado's "Peeping Tom" law also may apply to some drone-based surveillance.²¹ Local ordinances in Aurora, Boulder, Cherry Hills Village, Denver, Louisville, and Telluride govern recreational and/or commercial drone use, and other municipalities are considering adopting their own laws.

Federal and State Law Preemption

The legal framework for drone use must account for federal preemption of state and local laws, which occurs when: (1) Congress expresses a clear intent to preempt state law; (2) there is an

outright or actual conflict between federal and state law; (3) compliance with both federal and state law is physically impossible; (4) there is an implicit barrier within federal law to state regulation in a particular area; (5) federal legislation is so comprehensive as to occupy the entire field of regulation; or (6) state law stands as an obstacle to the accomplishment and execution of Congress's full objectives.²² Similarly, Colorado statutes may preempt local law.²³

As drones become more embedded in everyday business and residential life, and their impact on interstate commerce rapidly expands, the need for a uniform regulatory framework and consistent and effective enforcement increases. The potential for conflict among federal, state, and local commercial needs and privacy expectations will similarly increase. Industry is likely to push for statutorily explicit or implied preemption of local regulation; this has already occurred with regard to FAA regulation of drone use within certain geographic and altitudinal parameters. Drone operators complain anecdotally of situations where FAA regulations require drones to fly below 400 feet, yet some local regulations require them to fly at or above 500 feet.²⁴

Critically, if Colorado's and other states' statutory and common law remedies for drone intrusion and abuse prove inadequate, people may "take matters into their own hands."²⁵ And "where the law is perceived as a fairly blunt tool, people will increasingly resort to self-help remedies."²⁶ While criminal statutes offer some protection from electronic "listening in,"²⁷ they offer much less protection from "looking in." Presently, there are few easy remedies concerning intrusive drone activity.²⁸ Because the FAA considers drones to be aircraft, 18 USC § 32 prohibits damaging or destroying drones, and using a firearm to attempt the same may violate other laws. Similarly, electronically jamming a drone may violate federal law.²⁹

Colorado Tort Law and Drone Operations

Colorado recognizes various torts for which drone operators may bear civil liability where

their drone operations invade or interfere with the privacy or solitude of others. The torts involving invasion of privacy and trespass and nuisance are potentially applicable in addressing rapidly evolving drone technology.

Invasion of Privacy

Colorado recognizes the tort of invasion of privacy.³⁰ Three species of this tort are presently actionable: invasion of privacy by intrusion, invasion of privacy by public disclosure of private facts, and invasion of privacy by appropriation (Colorado has declined to recognize invasion of privacy by placing a person in a false light³¹). Only the first two variations are discussed here as generally relevant to drone monitoring.³²

Invasion of Privacy by Intrusion

To prove invasion of privacy by intrusion, a plaintiff must establish that (1) the defendant intentionally³³ invaded the plaintiff's privacy, (2) the invasion would be very offensive to a reasonable person, (3) the plaintiff suffered damages, and (4) the invasion was a cause of the plaintiff's damages.³⁴ Only a natural person may assert a claim for invasion of privacy, and other than a claim for appropriation, the right is personal and cannot be assigned.³⁵

Invasion of privacy by intrusion does not require physical intrusion, publicity, or general communication to the public.³⁶ The essence of the tort is interference with the plaintiff's solitude, seclusion, or private affairs and concerns.³⁷ Entering the plaintiff's premises, electronic eavesdropping or spying, unauthorized access to the plaintiff's postal mail or email, or repeated hounding or harassment may satisfy applicable standards. Potential damages for intrusion include compensation for (1) harm to a plaintiff's privacy interest resulting from the invasion, (2) mental suffering, (3) special damages, and (4) nominal damages if no other damages are proven.³⁸

A private cause of action is available for violation of federal illegal wiretapping laws, and relief may include adequate compensation.³⁹ No Colorado case has thus far recognized such a right under Colorado's wiretapping law.⁴⁰ However, Colorado wiretapping and

eavesdropping laws may help courts and juries define what constitutes a reasonable expectation of privacy that supports recovery in tort.⁴¹

There is no liability for reviewing publicly available information or observing or photographing someone in a public place. Generally observing and videotaping a plaintiff's premises from outside the property's perimeter is not an actionable intrusion, even if a high-powered lens is used to magnify the view of what can be readily seen.⁴² Typically, a plaintiff must have a possessory or proprietary interest in the property into which the intrusion is alleged.⁴³ The interest of a tenant, a hotel guest, or a storage locker lessee may also provide standing.⁴⁴ A "legitimate expectation of privacy" is a key element in evaluating the propriety of the intrusion.⁴⁵

Aggrieved parties may allege that drone owners and operators invaded their privacy by a drone listening in, looking in, or merely "invading their space." Whether an actionable invasion of privacy has occurred will depend on the circumstances and societal privacy expectations.

Invasion of Privacy by Public Disclosure of Private Facts

To prove invasion of privacy by public disclosure of private facts, a plaintiff must establish that (1) the defendant made a fact about the plaintiff public; (2) the fact was private before disclosure; (3) a reasonable person would find the disclosure highly offensive⁴⁶; (4) at the time of the disclosure, the defendant acted with reckless disregard of the private nature of the fact disclosed (i.e., the defendant knew or should have known that the fact disclosed was not of legitimate concern to the public); (5) the plaintiff suffered damages; and (6) the public disclosure of the fact was a cause of the plaintiff's damages.⁴⁷

Generally, the disclosure must be of a previously private matter; it cannot involve information that was already public, that was available from public records, or that the plaintiff left open to the public.⁴⁸ The public disclosure requires "communication to the public in general or to a large number of persons, as distinguished from one individual or a few."⁴⁹ However, a defendant may bear liability if it

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“initiates the process whereby the information is disclosed to a large number of persons.”⁵⁰ Public disclosure is not highly offensive if it involves the disclosure of normal daily activities or unflattering conduct that causes minor or moderate annoyance.⁵¹

Whether a matter is privileged as a legitimate public concern, and thus its disclosure is immune from liability, is likely a question of law for the court, as in defamation cases.⁵² Because the public disclosure element involves the right to circulate truthful information to the public, it implicates federal and state constitutional freedoms of speech and press.⁵³ The First Amendment protects the disclosure of highly offensive private facts if those facts have “some substantial relevance to a matter of legitimate public interest.”⁵⁴ Such matters might include murders and other crimes, suicides, accidents, fires, natural catastrophes, disease, and other topics of real, even if more appalling, popular appeal.⁵⁵ When a defendant raises a First Amendment privilege, the individual’s right to keep information private must be balanced against the press’s right to disseminate newsworthy information publicly.⁵⁶

Aggrieved parties may allege that people privy to information accessed by drones invaded their privacy by a drone listening in, looking in, or otherwise gathering data from or about them and then publicizing those facts. Whether an actionable invasion of privacy has occurred will depend on the nature of the information, changing societal expectations of what constitutes private information and a highly offensive disclosure of the same, and any free press privileges accompanying such disclosure.

Affirmative Defenses

In addition to the constitutional First Amendment free speech privileges and immunities discussed above, consent or waiver may serve as an affirmative defense to an invasion of privacy claim. This defense applies if the plaintiff, by words or conduct, led the defendant to reasonably believe the plaintiff had authorized or agreed to the defendant’s conduct, and the defendant acted in a manner and purpose consistent with the scope of such authorization or agreement.⁵⁷ While no Colorado case has yet

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addressed what statute of limitations applies to invasion of privacy claims, the two-year limitations period in CRS § 13-80-102 for tort claims is a likely candidate.

Remedies

Remedies for invasion of privacy may include statutorily capped non-economic damages for personal humiliation, mental and physical anguish and suffering, inconvenience, impairment of quality of life, reputational injury, and impairment to a plaintiff’s credit standing, as well as loss of income.⁵⁸ Damages for the cost of taking mitigation measures, such as hiring a public relations firm to help manage or negate the fallout from the public disclosure of private information, may be compensable.⁵⁹ Nominal damages may be properly awarded.⁶⁰ In an appropriate case, punitive damages may be available.⁶¹

Trespass and Nuisance

Trespass and nuisance claims do not directly implicate a landowner’s right of privacy, but the liability exposure they present may discourage privacy intrusions. Trespasses and private nuisances typically involve the invasion of or interference with a person’s private property rights, while a public nuisance often requires a balancing of a property owner’s versus others’ economic interests, weighing the gravity of the harm against the utility of the conduct.

Trespass claims have traditionally been limited to the intentional physical entry or intrusion upon or under another’s property causing physical damage to the property, or an intentional intangible intrusion with resulting physical damage, but (so far) not simply entry into the airspace above the property.⁶² In contrast, nuisance claims may involve noise, light, shadow, and odor conditions affecting another’s use and enjoyment of their property without accompanying physical damage.⁶³ If drone activity physically damages private property, a claim for trespass likely would accrue and would not require proof of the violation of an applicable standard of care relevant to a negligence claim, because all that is required is an intent to enter or to cause another to enter another’s property, or to do an act that in the natural course of events results in the intrusion.⁶⁴

Private Nuisance

A private nuisance is a non-trespassory invasion of another's interest in private use and enjoyment of his or her land.⁶⁵ To prove a private nuisance, a plaintiff must establish a substantial invasion of a plaintiff's interest in the use and enjoyment of his property when such invasion is (1) intentional and unreasonable, (2) unintentional and otherwise actionable under the rules for negligent or reckless conduct, or (3) so abnormal or out of place in its surroundings as to fall within the principle of strict liability.⁶⁶ Stated another way, a nuisance is an intentional, negligent, or unreasonably dangerous activity resulting in the unreasonable and substantial interference with a plaintiff's use and enjoyment of her property.⁶⁷ "To maintain a successful nuisance claim, a plaintiff must establish that the defendant has unreasonably interfered with the use and enjoyment of her property."⁶⁸ Unreasonableness is a question of fact that requires the fact finder to weigh the gravity of the harm against the utility of the conduct causing that harm.⁶⁹ Generally, to be unreasonable, "an interference must be significant enough that a normal person in the community would find it offensive, annoying, or inconvenient."⁷⁰

Public Nuisance

A public nuisance involves "the invasion of public rights, that is, rights common to all members of the public."⁷¹ In contrast, "[a] private nuisance is a tort against land and the plaintiff's actions must always be founded upon his interest in the land."⁷² Public nuisance suits are typically brought by governmental bodies seeking injunctive relief and often are based on a statutory prohibition.⁷³

Aerial Trespass and Nuisance

"Aerial trespass" assumes a property owner's possessory right to some portion of the airspace above the owner's property. Presently, whether an aerial trespass has occurred and is actionable depends on how courts construe Colorado's applicable statute and its common law of trespass, and whether and how federal law and regulations might preempt these laws.

CRS § 41-1-107 provides that "[t]he ownership of space above the lands and waters of this state is declared to be vested in the several owners of the surface beneath, subject to the right of flight of aircraft." Two Colorado cases have considered this statute in the context of claims arising from overflights emanating from Denver International Airport (DIA), but the statute did not have much bearing in either one, and neither case concerned "aerial" trespass or nuisance claims. Nevertheless, the cases may offer some insight into how such claims may be treated in the future.

In *Claassen v. City and County of Denver*, the Colorado Court of Appeals addressed a compensation claim by several landowners under the Colorado and US Constitution's "takings" and "damaging" clauses arising from aircraft overflying their property while taking off and landing at DIA.⁷⁴ The Court held that "navigable" airspace is in the public domain, and the plaintiff landowners had no property rights in the airspace.⁷⁵

Because the overflights occurred, by and large, more than 500 feet above the plaintiffs' property per FAA regulations, the trial court ruled that "there had been no physical entry into plaintiffs' property and no physical ouster of the plaintiffs from their property."⁷⁶ And because CRS § 41-1-107 subjects the ownership of airspace by landowners to the "rights of flight of aircraft," *Claassen* applied FAA "minimum safe altitude" regulations for "uncongested areas" to resolve the plaintiff's claims.⁷⁷

The Court stated that "absent a physical invasion into the airspace above plaintiffs' property that is below the navigable airspace, there can be no physical taking within the meaning of Colo. Const. art. II, § 15."⁷⁸ It held that "because plaintiffs had no protected property interest in the navigable airspace in which the aircraft here flew, the trial court correctly found that plaintiffs had sustained no compensable physical taking within the meaning of the federal and state constitutions."⁷⁹

The Court also addressed plaintiffs' contention that the overflights damaged their property by "creating noise, pollution, and vibration" on the property, interfering with the use and enjoyment of their property and causing its

diminution in value.⁸⁰ The Court held that because the alleged damages "did not differ in kind from those suffered by the public in general," they were not compensable.⁸¹ But the Court remanded plaintiffs' Fifth Amendment claims to the trial court for consideration after they had been previously dismissed as not ripe for review.

Thompson v. City and County of Denver involved claims for inverse condemnation, due to excessive noise and vibrations, by a landowner living beneath DIA flight paths.⁸² The Colorado Court of Appeals found that the "landowner's property interest in the land extends to the airspace directly over the property to the extent that the airspace can be used to benefit the underlying land."⁸³ However, it noted that because Congress had placed navigable airspace in the public domain, the surface owner's "property interest in airspace above the land is generally limited to that airspace which is below navigable limits."⁸⁴

The *Thompson* Court held that for Fifth Amendment "takings" purposes, only "frequent and low flights by aircraft, directly over private land, below 500 feet . . . that cause substantial, direct, and immediate interference with the property owner's enjoyment and use of the land, are takings."⁸⁵ The Court affirmed the judgment for defendant, finding that "because plaintiffs had no protected property interest in the navigable airspace in which the aircraft here flew, the trial court correctly found that plaintiffs had sustained no compensable physical taking within the meaning of the federal and state constitutions."⁸⁶

If drones are treated as aircraft, their freedom of flight should track that of commercial and private aircraft. However, FAA regulations require drones to fly below navigable airspace (not more than 400 feet from ground level) for safety and other reasons.⁸⁷ This means that there is a 400-foot zone between ground level and the authorized ceiling where federal regulations require drones to fly that may encroach on a landowner's "ownership of space above the lands . . . subject to the right of flight of aircraft."⁸⁸

Thus, many questions persist as to when drone operation might constitute an actionable trespass or nuisance.⁸⁹ The Uniform Law Com-

mission sought to initially redefine property rights by drafting a rigid per se aerial trespass rule that “cuts the commercially exploitable airspace in half, potentially stifling innovation if adopted.”⁹⁰ Industry reacted unfavorably to that draft and its later revisions, and none of the proposed rules was adopted.⁹¹

Limits of Tort Law in the Face of Evolving Drone Technology

Colorado’s common law torts of trespass and intrusion upon seclusion are largely premised on the proximity of the wrongful conduct to private property. However, drones can operate at significant distances from their targets in nearly undetectable fashion.⁹² This undetectability may effectively preclude some claims, so as presently conceived, Colorado tort law may need to evolve to address 21st-century drone activity wrongdoing. Areas ripe for reexamination include how Colorado law treats the airspace above private property. For example, a statute or judicial decision could create a privacy “bubble,” extending private property rights into this airspace and imposing liability for remote sensory intrusions into that bubble. But ironically, while personal expectations of privacy may expand in light of enhanced remote sensing devices, societal expectations of privacy may diminish due to the sharing culture reflected by the proliferation of social media, the gig economy, the voluntary submission to location and data aggregation services, and people consciously leaving electronic footprints of their daily routines.⁹³

A tortfeasor’s intent in an invasion of privacy case may also need to be reconsidered. High-tech drones may take extremely high-resolution photos of high-rise bedroom windows, capturing some residents in *flagrante delicto*, but without any intent to view, use, or disseminate the images. How should such conduct be addressed? And in shaping the future of tort law, courts will need to consider the extensive statutory, regulatory, and best practices drone operations framework likely to develop over time.⁹⁴

Some Thought Experiments

It is helpful to consider the following actual or potential drone characteristics to identify where the problematic intersections of tort law and

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technological advances in drone technology may be found:

- Drones the size of gnats emit no noticeable sound and can take high-resolution photographs and make low-decibel recordings.
- Drones can intercept wi-fi signals within a home and conduct thermal imaging.
- Drones can take high-resolution photos, collect directional low-decibel sound recordings, and conduct and collect remote infrared sensor data and images through walls, from low-space altitudes.
- Some drones are linked to facial recognition programs.
- Interconnected drones can track people and cars en masse.
- Landed drones are able to direct lasers at windows from a great distance and detect and record conversations inside.

Do any of these activities constitute an invasion of the property owner’s privacy? As to each, should it matter to establishing an invasion of privacy claim if the information is simply anonymized, collated, and shared with third parties?

Issues lawyers might consider from a consumer-client perspective include:

- When requesting delivery, do consumers implicitly waive certain privacy rights? Are express boilerplate waivers of such rights enforceable?
- Most of us are used to receiving digital images of delivered packages on our front steps. May the retailer or delivery service also visually or aurally monitor and catalogue the recipient’s home and home-related information, and then aggregate and/or sell the data?⁹⁵
- Even if a retailer’s use and storage of a drone’s image and sound recordings are proper and regulated, what if hackers commandeer these systems for their own nefarious uses? Should retailers and delivery vendors take steps to prevent such efforts and, if so, how extensive should their obligation be?

Issues lawyers might consider from an industry perspective are:

- Should consumer contracts include waivers of privacy rights and/or liability

limitations associated with a business's drone use, and indemnity against claims brought by other household occupants?

- Should consumer contracts require the consumer to consent to certain types of surveillance as a condition to receiving services that use drones?
- Should businesses who use third parties to supply them drone services insist on indemnity from those third parties against drone-related liabilities?
- Should businesses obtain liability insurance that covers potential invasion of privacy and trespass/nuisance exposures for drone-related activities? (Such insurance is discussed in more detail below.)

The Future of Privacy Law

As technology and reasonable expectations of privacy change, so does the law. Within the last decade the US Supreme Court held that the Constitution's prohibition against unreasonable governmental searches originating in 1791⁹⁶ extends to a law enforcement officer's placement of a GPS tracking device in a car. Compared to GPS, the "breadth and scope of information that can be amassed by aerial surveillance tracking large numbers of people is far greater."⁹⁷ As drone technology advances, privacy law will be shaped by and evolve with these changes.⁹⁸

Liability Insurance Coverage

Assuming some drone activities lead to tort liability, current liability insurance policies may offer protection, while future policies may be tailored to expand this protection. Most current commercial general liability (CGL) policies include coverage for "personal injury," as distinguished from "bodily injury." Typically, personal injury is defined to include "invasion of the right to privacy" and "wrongful entry," but such coverage is subject to various exclusions for, among other things, knowing violations of the rights of others, intentional harms, contractual liabilities, and criminal acts.⁹⁹ These terms usually are not further defined, so courts will give them the broadest reasonable construction favoring coverage.¹⁰⁰


The Colorado Court of Appeals has held that an insured who tape-recorded a sexual encounter

committed an intentional tort, and allegations of negligent invasion of privacy will not avoid an insurance policy's intentional harm exclusion.¹⁰¹

It may seem odd that an insurance policy would confer coverage for invasions of privacy but exclude coverage for intentional harms, where most privacy claims require proof of intentional conduct. However, such coverage was not deemed illusory in the context of a claim arising from an insured's alleged use of a date-rape drug.¹⁰²

Conclusion

Advances in drones and other UAVs, computer hardware and software, information aggregation, nano-electronics, remote sensing, acoustics, digital imagery, disc storage, and more are constantly occurring, if not accelerating. These developments, when combined with a legal system that is regularly playing catchup with technological progress¹⁰³ and being employed against a background of ubiquitous boilerplate contracts and unread waiver/consent forms, raise a lot of uncertainty. State and federal regulations may help curb drones from intruding into our private worlds, but they may also stifle drone innovation. Drone delivery services can be expected to secure, buy, lease, or license overflight rights above public and private property. The law will no doubt evolve and seek to strike a balance among competing concerns.

In the meantime, before you click on "I accept all terms and conditions" for your first Walmart, Amazon, or Zappos drone delivery, you may want to consider the words of an infamous paranoiac: "I trust no one, not even myself."¹⁰⁴ 



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NOTES

1. See generally Ravich, "Privacy Law in the Drone Age: Lowering (Reasonable) Expectations," vol. 37, no. 5 *GPSolo* 13, 14 (Amer. Bar Assoc. Sept./Oct. 2020).

2. See Brobst, "Enhanced Civil Rights in Home Rule Jurisdictions: Newly Emerging UAS/Drone Use Ordinances," 122 *W. Va. L. Rev.* 741, 742 (2020) ("UAS have already become tools of government warfare, criminal trespass, and invasions of privacy by both private and government entities."). See also *Prince Harry v. John Doe 1*, Complaint for Invasion of Privacy (L.A. Sup. Ct.—West Dist., July 23, 2020), <https://deadline.com/wp-content/uploads/2020/07/harry-meghan-complaint-wm.pdf>; Corn, "The Legal Aspects of Banning Chinese Drone Technology," *Lawfare* (Feb. 4, 2021) (noting that the world's largest drone manufacturer is Dajiang Innovations (DJI) and warning of "the company's potential cooperation with, or at least susceptibility to, Chinese espionage efforts"), <https://www.lawfareblog.com/legal-aspects-banning-chinese-drone-technology>.

3. See generally Farber, "Keep Out! The Efficacy of Trespass, Nuisance and Privacy Torts as Applied to Drones," 33 *Ga. St. U. L. Rev.* 359, 362 (2017) ("These aerial observers enable operators to gather information about people and places via cameras, live video-streaming capability, and sensory-enhancing technologies that can be mounted to the drone. Once collected, information can be stored forever and broadly disseminated electronically."). Private investigators might use drones for surveillance of persons, which could expose lawyers who hire them to potential civil liability. See Plesko, "On the Ethical Use of Private Investigators," 92 *Denv. L. Rev.* 157, 160 (May 2015). Yet drones might also enhance privacy by detecting trespassers and intruders, and, perhaps, even identifying spying drones.

4. de Pascale Jr., "Path to Dystopia: Drone-Based Policing and the Fourth Amendment," 34 *Crim. Just.* 26, 29 (2020) ("almost every state has at least one public safety agency with drones, but most have no relevant regulations in place"). In some instances, drone restrictions may implicate First Amendment concerns. See Brobst, *supra* note 2 at 773-74 (Ag-Gag laws may test the limits of the "First Amendment rights of journalists and activists to surveil and reveal injustice," while artistic (using drones to make art) and religious expression (certain belief groups consider recording certain sites sacrilege) rights may be implicated as well).

5. Ravich, *supra* note 1 at 14.

6. See Farber, *supra* note 3 at 360 ("There are endless civil applications for drones, and the possibilities will continue to grow at even higher rates as the technology develops and becomes more accessible to the public"). See also O'Dorisio, "The Current State of Drone Law and the Future of Drone Delivery," 94 *Denv. L. Rev. Online* 1 (2016) (cataloguing predicted economic impacts as the drone industry evolves).

7. FAA, UAS by the Numbers (2021), https://www.faa.gov/uas/resources/by_the_numbers.

8. Farber, *supra* note 3 at 379.

9. Liberatore, “From guns that shoot around corners to mini spy-drones: The James Bond-style gadgets that are REAL that Q never dreamt of,” *Daily Mail.com* (Apr. 14, 2017), <https://www.dailymail.co.uk/sciencetech/article-4412712/The-real-life-gadgets-James-Bond-s-Q-never-dreamt-of.html>. In addition to being depicted in film, filming from drones has captured some of the *Bond* franchise’s most iconic action scenes. Or consider drones that look like birds, or drone swarms, each collecting publicly available information, creating a public-private surveillance state. See Andersen, “The Panopticon is Already Here,” *Atlantic Monthly* (Sept. 2020), <https://www.theatlantic.com/magazine/archive/2020/09/china-ai-surveillance/614197>.

10. Presently, the term “unmanned” is a bit misleading as almost no drones operate fully autonomously. See McNeal, “Drones and the Future of Aerial Surveillance,” 84 *Geo. Wash. L. Rev.* 354, 366 (2016). The term “unmanned” as used by the FAA means there is no one on board to direct the aircraft. It offers little helpful meaning in the context of a UAS.

11. *United States v. Causby*, 328 U.S. 256, 263–64 (1946). *Causby* rejected the ancient doctrine of *cujus est solum, ejus est usque ad caelum*, meaning roughly “to whomsoever the soil belongs, he owns also to the sky and to the depths,” as having “no place in the modern world.” *Id.* at 260–61. *Causby* effectively divided navigable airspace into two domains: a “public highway” from which property owners could not exclude flying aircraft; and the airspace below, extending down to the surface, from which property owners had some right to exclude aircraft. See McNeal, *supra* note 10 at 380. Colorado, by statute and case law, adheres to the common law rule. See *People v. Emmert*, 597 P.2d 1025, 1027 (Colo. 1979) (holding that the public has no right to use “waters overlying private lands for recreational purposes” without the owner’s consent, *id.* at 1030).

12. Operation and Certification of Small Unmanned Aircraft Systems, 14 C.F.R. Parts 21, 43, 61, 91, 101, 107, 119, 133, and 183. See https://www.faa.gov/uas/media/RIN_2120-AJ60_Clean_Signed.pdf.

13. 115 Pub. L. 254, 132 Stat. 3186 §§ 351–52, calling for investigation into modification of 14 C.F.R. § 107, which governs drone activities, and codified in part at 49 USC § 44802.

14. In Class G (Uncontrolled) Airspace, an aircraft (such as a UAV) may be flown from the surface to not more than 400 feet above ground level and must comply with all airspace restrictions and prohibitions. See FAA Advisory Circular 91-57B at § 7.1.6 (May 31, 2019), https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_91-57B.pdf. UAVs cannot fly in controlled airspace without an FAA authorization. *Id.* at § 7.1.5.2.

15. Many of these limitations have been criticized as arbitrary and unmoored from the realities of this new and expanding technology, especially with regard to package delivery. See O’Dorisio, *supra* note 6 at 4–5.

16. Ravich, *supra* note 1 at 15.

17. 86 Fed. Reg. 4390 (Jan. 15, 2021), <https://www.govinfo.gov/content/pkg/FR-2021-01-15/pdf/2020-28948.pdf>.

18. Sound emitted by some drones is not readily perceptible. And drone-mounted lasers, effective from miles away, can theoretically beam invisibly onto windowpanes and capture conversations inside remotely, if the drone is powered down sufficiently to eliminate airframe vibration and resulting interference.

19. Kohler, “The Sky is the Limit: FAA Regulations and the Future of Drones,” 15 *Colo. Tech. L. J.* 151, 174–75 (2016) (drone privacy concerns generally have been addressed at the state and local level). One commentator urges that drone-specific privacy regulations will be cumbersome, unworkable, and stifle innovation. See generally McNeal, *supra* note 10 at 415. Instead, he proposes broader information collection, storage, and dissemination regulation, combined with accountability, transparency, and oversight measures. *Id.* at 416.

20. 2 Colo. Code Regs. § 406-0-IV-004(C). In 2017, CRS § 24-33.5-1228 was amended to create a Colorado firefighting air corps to “[e]stablish and support a Colorado wildland fire prediction and decision support system,” CRS § 24-33.5-1228(2.5)(b)(IV), and to create a “center of excellence” to “conduct a study concerning the integration of unmanned aircraft systems within state and local government operations that relate to certain public-safety functions,” CRS § 24-33.5-1228(2.5)(c)(I).

Drone operations are not permitted in Colorado ski areas or national parks and do not appear to be permitted in Colorado state parks. See 2 Colo. Code Regs. 405-1-1-100(C)(24), Parks and Outdoor Recreation Lands: Ch. p-1, § 100-C.24 (“It shall be unlawful to operate radio-controlled and/or fuel-propelled models, except in designated areas.”), <https://cpw.state.co.us/Documents/RulesRegs/Regulations/ChP01.pdf>. Department of Homeland Security regulations may affect drone use near reservoirs, military installations, and the like. Bills defining criminal trespass by and harassment with drones (HB 15-1555), limiting law enforcement use of drones (HB 15-059), flying drones near airports and correctional facilities (HB 16-1026), and prohibiting drones from interfering with public safety operations (HB 18-1314) have all died in committee.

In contrast, one author notes that “two-thirds of all states have enacted drone-specific laws”; 26 states have passed drone legislation addressing privacy concerns, including warrant requirements; and 19 states have adopted “drone-specific laws providing privacy protections from non-government actors.” Ravich, *supra* note 1 at 15. Several of these states merely extended their existing privacy, voyeurism, and trespass laws rather than passing new stand-alone drone laws. *Id.* at 16. For an updated list of states adopting drone regulations, see Nat. Conf. of State Legis., Current Unmanned Aircraft State Law Landscape (Jan. 20, 2021), <https://www.ncsl.org/research/transportation/current-unmanned-aircraft-state-law-landscape.aspx>.

Specifically, Florida has a comprehensive statutory scheme regulating drones, which

includes a private right of action for damages for violations. See Fla. Stat. § 934.50. Some states, like Nevada, do not allow drones to enter airspace within 250 feet above private property. See Nev. Rev. Stat. §493.103(1). Other states’ laws include altitude restrictions, requirements that operators always maintain a line of sight with the device, and proscriptions against nighttime use. See generally US Drone Laws: Overview of Drones Rules and Regulations in USA by State (911 Security June 2019), <https://www.utsystem.edu/sites/default/files/offices/police/policies/USDroneLaws.pdf>. And many states have adopted laws rendering criminal certain drone activities. *Id.*

21. See CRS § 18-3-405.6.

22. See *Dep’t of Health v. The Mill*, 887 P.2d 993, 1004 (Colo. 1994) (describing federal-state preemption analysis).

23. See *Webb v. City of Black Hawk*, 295 P.3d 480, 486–87 (Colo. 2013) (describing state-local preemption analysis).

24. Compare FAA Office of the Chief Counsel, State and Local Regulation of Unmanned Aircraft Systems (UAS) Fact Sheet (Dec. 17, 2015) (“State and local restrictions affecting UAS operations should be consistent with the extensive federal statutory and regulatory framework pertaining to control of the airspace . . .”), https://www.faa.gov/uas/resources/policy_library/media/UAS_Fact_Sheet_Final.pdf, with Fort Collins Mun. Code Art. IX, § 23-193(d)(3) (unlawful to “fly lower than five hundred (500) feet above a natural area, any type of aircraft, . . .”). The FAA requires drones to fly lower than 400 feet in controlled airspace. See 14 C.F.R. § 107.51.

25. Farber, *supra* note 3 at 365.

26. *Id.*

27. See CRS § 18-9-303, 304 (generally, using an electronic device to listen to or record a phone line or private conversation or communication, or doing so while not visibly present, without the consent of at least one participant, is a crime, with certain statutory exceptions). Accidental interceptions are not a crime, but it appears that such conduct may become criminal if the listener persists. A person who “[k]nowingly uses any apparatus to unlawfully do, or cause to be done, any act prohibited by the statute or aids, authorizes, agrees with, employs, permits, or intentionally conspires with any person to violate” the statute is liable as well. CRS § 18-9-303(1)(f).

28. Stalking (CRS § 18-3-602) and harassment (CRS § 18-9-111) laws may offer help. Reports also can be made to a local FAA Flight Standards District Office. Drone operators can be fined if they violate FAA rules. One drone pilot was fined \$182,000 for multiple violations. See Rattigan, “FAA Fines Drone Pilot \$182,000,” *JDSupra* (Dec. 24, 2020), <https://www.jdsupra.com/legalnews/faa-fines-drone-pilot-182-000-27676>.

29. See 47 USC § 302a(a).

30. See *Rugg v. McCarty*, 476 P.2d 753 (1970), and *Robert C. Ozer, P.C. v. Borquez*, 940 P.2d 371, 376–79 (Colo. 1997). See also Warren and Brandeis, “The Right to Privacy,” 4 *Harv. L. Rev.*

193, 195 (1890) (article generally viewed as prompting recognition of the tort of invasion of privacy and warning that “numerous mechanical devices threaten to make good the prediction ‘what is whispered in the closet shall be proclaimed in the house-tops.’”). Cf. *Warden v. Hayden*, 387 U.S. 294, 323 (1967) (“the individual should have the freedom to select for himself the time and circumstances when he will share his secrets with others and decide the extent of that sharing”) (Douglas, J., dissenting). While thus far Colorado’s civil privacy protections have derived from the common law and the US Constitution, some have suggested that arguments may exist for finding a right to privacy in Colorado’s Constitution. See McAdam and Webb, “Privacy: A Common Law and Constitutional Crossroads,” 40 *Colo. Law. 55* (June 2011).

31. *Denver Publ’g Co. v. Bueno*, 54 P.3d 893 (Colo. 2002).

32. See CJI-Civ. 28:4 for more information on invasion of privacy by appropriation.

33. A defendant intends to invade another’s privacy if it knows that its “conduct will almost certainly cause an invasion of privacy.” CJI-Civ. 28:3. A reckless invasion is insufficient. *Fire Ins. Exch v. Sullivan*, 224 P.3d 348, 352 (Colo.App. 2009).

34. CJI-Civ. 28:1.

35. *McKenna v. Oliver*, 159 P.3d 697, 700 (Colo. App. 2006) (describing elements).

36. See *Doe v. High-Tech Inst., Inc.*, 972 P.2d 1060 (Colo. 1998).

37. *Id.* at 1067.

38. *Id.* at 1066.

39. See 18 USC § 2520.

40. See CRS § 18-9-303(1)(a). Cf. *Quigley v. Rosenthal*, 327 F.3d 1044, 1073 (10th Cir. 2003) (interception of private telephone conversations qualifies as an intentional intrusion into one’s seclusion or solitude, but the later use of the intercepted conversation would not constitute a further intrusion after the interception was complete).

41. Cf. *People v. Lesslie*, 939 P.2d 443, 446 (Colo. App. 1996) (finding that bar restroom occupants in proximity to listening device had objectively reasonable expectation of privacy and stating that whether a legitimate expectation of privacy exists in a particular case depends on the “facts and circumstances, with the actual expectation manifested by a party being a question for the factfinder and the objective reasonableness of the expectation being determined for the particular circumstances as a matter of law”).

42. *Sundheim v. Bd. of Cty. Comm’rs*, 904 P.2d 1337, 1351 (1995) (invasion of privacy tort claim brought against county commissioners arising from county hiring private investigator to surveil plaintiffs’ property for zoning violations), *aff’d on other grounds*, 926 P.2d 545 (Colo. 1996).

43. *Id.* at 1350.

44. *Id.* (providing examples of who can consent to a property search, but also noting that “mere ownership” may not suffice, citing *People v. Breidenbach*, 875 P.2d 879 (Colo.1994)).

45. *Id.* (citing *People v. Oates*, 698 P.2d 811, 814

(Colo. 1985)). *Oates* discussed this test in the context of evaluating the reasonableness of the warrantless placement of a beeper in a drum of chemicals allegedly used to manufacture drugs. The Court held that “any governmental action intruding upon an activity or area in which one holds such an expectation of privacy is a ‘search’ that calls into play the protections of the Colorado Constitution.” *Oates*, 698 P.2d at 814. *Oates* also held that “[w]hether an expectation of privacy is ‘legitimate’ is determined by a two-part inquiry: whether one actually expects that the area or activity subjected to governmental intrusion would remain free of such intrusion, and whether ‘that expectation is one that society is prepared to recognize as reasonable.’” *Id.* (quoting *People v. Sporleder*, 666 P.2d 135, 140 (Colo. 1983)).

46. “Highly offensive” means that the disclosure would cause emotional distress or embarrassment to a reasonable person, and such determination is usually a question of fact. *Ozer*, 940 P.2d at 377-78.

47. *Id.* at 377 (“facts related to an individual’s sexual relations, or ‘unpleasant or disgraceful’ illnesses, are considered private in nature and the disclosure of such facts constitutes an invasion of the individual’s right of privacy”). See also CJI-Civ. 28:5.

48. *Ozer*, 940 P.2d at 377-79. See also CJI-Civ. 28:5, Notes on Use ¶ 6 (citing *Restatement (Second) of Torts* § 652D cmt. b (Am. L. Inst. 1977)).

49. *Ozer*, 940 P.2d at 377.

50. *Id.* at 379 n.7.

51. See *id.* at 378. See also CJI-Civ. 28:9.

52. See, e.g., *Walker v. Colo. Springs Sun, Inc.*, 538 P.2d 450, 459 (1975), *overruled on other grounds by Diversified Mgmt., Inc. v. Denver Post, Inc.*, 653 P.2d 1103 (Colo. 1982).

53. See generally *Cox Broad. Corp. v. Cohn*, 420 U.S. 469, 489 (1975). See also *Ozer*, 940 P.2d at 378 (privacy rights may clash with free speech and free press rights guaranteed by the US and Colorado Constitutions). Something is newsworthy if the information disseminated is for “purposes of education, amusement or enlightenment,” and “the public may reasonably be expected to have a legitimate interest in what is published.” *Id.* (citing *Gilbert v. Medical Econs. Co.*, 665 F.2d 305, 308 (10th Cir. 1981) (quoting the *Restatement (Second) of Torts* § 652D cmt. j (Am. L. Inst. 1976))).

54. *Ozer*, 940 P.2d at 378.

55. See CJI-Civ. 28:5, Notes on Use ¶ 6 (citing *Restatement (Second) of Torts* § 652D cmts. d-f (Am. L. Inst. 1977)). Even with regard to such matters, however, there may be some intimate personal details that a plaintiff is entitled to keep private. *Id.* at cmt. h.

56. Grund et al., 7A *Colo. Personal Injury Practice—Torts and Insurance (Colo. Practice Series)* § 33:9 (Thomson West 3d ed. 2020).

57. See *Borquez v. Robert C. Ozer, P.C.*, 923 P.2d 166, 175-76 (Colo.App. 1995), *aff’d in part, rev’d in part on other grounds*, 940 P.2d 371. See CJI-Civ. 28:13.

58. See *Doe v. High-Tech Inst., Inc.*, 972 P.2d 1060, 1066 (Colo.App. 1998). See also CJI-Civ.

28:14, Notes on Use ¶ 6 (citing CRS § 13-21-102.5).

59. See *Gundersons, Inc. v. Tull*, 678 P.2d 1061, 1065 (Colo.App. 1983) (plaintiff entitled to recover as consequential damages expenses and other costs incurred in taking reasonable steps to mitigate damages), *aff’d in part, rev’d in part on other grounds*, 709 P.2d 940 (Colo. 1985).

60. See *Doe*, 972 P.2d at 1066.

61. See CRS § 13-21-102 (where injury “is attended by circumstances of fraud, malice, or willful and wanton conduct,” exemplary damages may be awarded).

62. See *Burt v. Beautiful Savior Lutheran Church*, 809 P.2d 1064, 1067 (Colo.App. 1990) (describing elements of claim); *Pub. Serv. Co. of Colo. v. Van Wyk*, 27 P.3d 377, 390-91 (Colo. 2001) (holding that because intrusion of electromagnetic fields, radiation waves, and noise emitted from power lines do not cause physical damage, they will not support a trespass claim). See also CJI-Civ. 18:1. Geophysical trespasses are actionable. See *Mallon Oil Co. v. Bowen/Edwards Assocs., Inc.*, 965 P.2d 105, 110 (Colo. 1998). See also *Restatement (Second) of Torts* § 158, cmt. i (Am. L. Inst. 1965) (“The actor, without himself entering the land, may invade another’s interest in its exclusive possession by throwing, propelling, or placing a thing either on or beneath the surface of the land or in the air space above it.” (Emphasis added), cited with approval in *Pub. Serv. Co. of Colo.*, 27 P.3d at 389).

63. See, e.g., *Woodward v. Bd. of Dirs. of Tamarron Ass’n of Condo. Owners, Inc.*, 155 P.3d 621, 629 (Colo.App. 2007) (“noise can be a nuisance”); *Wright v. Ulrich*, 91 P. 43, 44 (Colo. 1907) (harmful noises and stenches emanating from slaughterhouse constituted a continuing nuisance); *Krebs v. Hermann*, 6 P.2d 907, 909 (Colo. 1931) (upholding nuisance claim against kennel whose offensive odors and barking dogs deprived plaintiff and his family of sleep); *Staley v. Sagel*, 841 P.2d 379 (Colo. App. 1992) (affirming damages judgment for past impairment of quality of life on nuisance claim based on effects of dust, smell, and waste disposal from neighboring hog farm); *Davis v. Izaak Walton League of Am.*, 717 P.2d 984, 986 (Colo.App. 1985) (affirming judgment against shooting range under public nuisance noise statute); *Nw. Water Corp. v. Pennetta*, 479 P.2d 398 (Colo.App. 1970) (alleged noise when tank filled or emptied may support nuisance claim).

64. See *Miller v. Carnation Co.*, 516 P.2d 661, 664 (Colo.App. 1973); *Antolovich v. Brown Grp. Retail, Inc.*, 183 P.3d 582, 603 (Colo.App. 2007). See also CJI-Civ. 18:1.

65. *Allison v. Smith*, 695 P.2d 791, 793-94 (Colo. App. 1984).

66. *Van Wyk*, 27 P.3d at 391 (citing *Restatement (Second) of Torts* § 822).

67. *Id.*

68. *Id.*

69. *Id.*

70. *Id.*

71. *Hoery v. United States*, 64 P.3d 214, 218 n.5 (Colo. 2003).

72. *Id.*
73. See generally Grund et al., *supra* note 56 at § 31:2.
74. *Claassen v. City and Cty. of Denver*, 30 P.3d 710 (Colo.App. 2000).
75. *Id.* at 712-13.
76. *Id.* at 712.
77. *Id.* at 713. For “congested” areas, FAA regulations prohibit flights lower than 1,000 feet. See 14 C.F.R. § 91.119(b).
78. *Claassen*, 30 P.3d at 713.
79. *Id.* at 713.
80. *Id.*
81. *Id.* at 714 (relying in part on an earlier case alleging similar complaints about tramway operations).
82. *Thompson v. City and Cty. of Denver*, 958 P.2d 525 (Colo.App. 1998).
83. *Id.* at 527.
84. *Id.* at 528.
85. *Id.*
86. *Id.*
87. See 14 C.F.R. § 107.51. Some exemptions are available under the Federal Aviation Administration Modernization and Reform Act of 2012 § 333 to operate a drone in controlled airspace.
88. See CRS § 41-1-107.
89. *But see* Cullers, *Drone Flyover a Trespass Under Colorado Law*, Herms & Herrera, LLC, <https://hhlawoffice.com/colorado-drone-trespass> (concluding that “someone flying a drone over another’s property without permission below the [FAA] navigability threshold likely commits a trespass under Colorado law.”). See also Phillips, *Trespass, Nuisance and Privacy: More Questions than Answers?* at 6-18 Steptoe & Johnson Whitepaper (collecting statutes that may bear on whether certain drone activity might be actionable), <https://www.steptoe-johnson.com/sites/default/files/Trespass,%20Nuisance%20and%20Privacy.pdf>. Cf. Wennogle, “Drones and utility easements: Who has the airspace rights?” *Colo. Real Est. J.* (Sept. 2, 2015) (suggesting that easement holders, such as utility companies who wish to inspect their powerlines with drones, may have significant leeway to do so pursuant to their existing easement rights because the law has historically contemplated a certain amount of normal evolution in such rights with changing times and technologies, but which still requires a balancing of interests between the easement holder and the burdened estate), <http://www.signatureflip.com/sf01/article.aspx/?i=6856>.
90. See generally Watson, “Maximizing the Value of America’s Newest Resource, Low-Altitude Airspace: An Economic Analysis of Aerial Trespass and Drones,” 95 *Ind. L.J.* 1399, 1400 (Fall 2020).
91. *Id.* Perhaps unwittingly anticipating this concern, Colorado Supreme Court Justice Carrigan dissented in a non-navigable stream trespass case, explaining, “If a landowner, for instance, has the right to all of the air flowing above his or her land, he or she also has the exclusive right to exclude others from trespassing in the airspace. Violators who infringe that airspace may be prosecuted for criminal trespass (as in this case), sued for damages or both.” *People v. Emmert*, 597 P.2d 1025, 1032 (Colo. 1979) (Carrigan, J., dissenting). In 2020, the American Bar Association’s House Delegates adopted Resolution 111, urging various governmental bodies and agencies to protect privacy rights that may be affected by UAS. Reynolds, “ABA House of Delegates passes resolution on drones; delegate calls it ‘a hot topic,’” *ABA J.* (Feb. 17, 2020), <https://www.abajournal.com/news/article/resolution-111>. In 2011, the Professional Society of Drone Journalists was formed with the purpose of “developing small drones and exploring best practices for their use in investigative, weather, sports, and other types of reporting,” as quoted in Conn, “Who’s Protecting Whom? An Analysis of the Newest Federal Aviation Administration’s Unmanned Aerial Vehicle Regulations and Restrictions and their Hindrance to Technological Advancement,” 20 *J. High Tech. L.* 304, 306-07 (2020) (internal quotations omitted).
92. “Technologies such as wi-fi sniffers, license plates readers, night vision cameras, facial recognition technology and other biometric devices, and high-powered telephoto lenses make distance a fairly blunt obstacle to the collection of information.” Farber, *supra* note 3 at 389. Colorado’s Consumer Data Privacy Act, CRS §§ 6-1-713 et seq., requires “covered” entities collecting or monetizing data to use reasonable and appropriate measures to protect Colorado residents’ “personally identifiable information,” such as biometric data. See generally McIntosh, “Privacy Basics for Colorado Lawyers: The Colorado Consumer Data Privacy Act and the California Consumer Privacy Act,” 48 *Colo. Law.* 26 (Sept. 2019).
93. See generally Ohm, “The Fourth Amendment in a World Without Privacy,” 81 *Miss. L.J.* 1309, 1313-20 (2012) (noting that “the one device” + “the cloud” + “the social [media]” + “Big Data” = the surveillance society, which may lead to the death of privacy).
94. See generally Farber, *supra* note 3 at 408-09 (describing ongoing regulatory efforts and goals). See also Kaminski, “When the Default Is No Penalty: Negotiating Privacy at the NTIA,” 93 *Denv. L. Rev.* 925, 935-49 (2016) (discussing drone privacy “best practices” debate and stakeholder concerns with the Dep’t of Commerce’s Nat’l Telecomms. and Info. Admin. (NTIA)’s regulatory model). Per the NTIA, these best practices include practices to “restrict continuous collection of data about individuals, require drone operators to minimize both operations and surveillance over private property, and encourage drone operators not to share information for marketing purposes without consent.” *Id.* at 939-40. The American Civil Liberties Union and other individual rights advocates criticized these practices for “allowing drone operators to collect private data without consent; allowing persistent, continuous surveillance without consent, even in traditionally private spaces; and allowing the use of the data for certain purposes without consent.” *Id.* at 940.
- Some commentators worry that over-regulation may chill drone innovation and render US companies less competitive. See, e.g., Conn, *supra* note 91 at 308; Calandrillo et al., “Deadly Drones? Why FAA Regulations Miss the Mark on Drone Safety,” 23 *Stan. Tech. L. Rev.* 182, 182 (2020) (“the FAA has departed from Congressional will by imposing an excessive regulatory regime that threatens to stifle drone technology and innovation”; “myriad scientific and pragmatic applications of cutting-edge drone technology have been stalled or thwarted entirely inside the United States, forcing innovation efforts to move abroad.”); and Bateman, “Decentralizing Drone Regulations in Low-Altitude Airspace,” *B.C. Intell. Prop. & Tech. F.* at 1 (Sept. 17, 2020) (“the FAA has compromised domestic drone businesses’ ability to compete globally with foreign drone businesses that operate in countries with permissive regulations for commercial drones. . . . States should affirm their authority over drone operations in low-altitude airspace to accelerate competition in the drone industry and to tailor drone regulation to local preferences for privacy, property rights, and civil liberties concerns.”).
95. Angwin, “Dagnet Nation: A Quest for Privacy, Security, and Freedom in a World of Relentless Surveillance,” 12 *Colo. Tech. L.J.* 291, 293 (2014) (“We are living in a Dagnet Nation—a world of indiscriminate tracking where institutions are stockpiling data about individuals at an unprecedented pace.”). The author reports one homeowner’s concerns about drone surveillance conducted by “a criminal who plans to break into our house or a peeping-tom.” *Id.* at 298.
96. The Fourth Amendment, adopted in 1791, provides: “The right of the people to be secure in their persons, houses, papers and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.” US Const. Amend. 4.
97. Farber, *supra* note 3 at 373.
98. See *United States v. Jones*, 565 U.S. 400 (2012).
99. *Fire Ins. Exch. v. Sullivan*, 224 P.3d 348, 351-53 (Colo.App. 2009).
100. See, e.g., *Blackhawk-Central City Sanitation Distr. v. Am. Guar. and Liab. Ins. Co.*, 856 F.Supp. 584, 590-91 (D.Colo. 1994), *rev’d on other grounds*, 214 F.3d 1183 (10th Cir. 2000) (“wrongful entry” held ambiguous so as to confer coverage for sewage discharge claims).
101. *Fire Ins. Exch. v. Bentley*, 953 P.2d 1297, 1301 (Colo.App. 1998).
102. *Sullivan*, 224 P.3d at 352-53 (Colo.App. 2009).
103. Farber, *supra* note 3 at 364 (“As is often the case with any new and prolific technology, unmanned aircraft is outpacing the law.”).
104. Khrushchev, “Khrushchev: Notes from a Forbidden Land,” *Time-Life* at 4 (Nov. 30, 1970) (quoting Joseph Stalin).