Police Robots / Unmanned Ground Systems

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Overview

Police robots are remotely operated ground platforms used to place sensors, cameras, communication equipment, manipulators, or other tools into environments where sending an officer would create unnecessary risk. They include bomb-disposal and EOD robots, tracked or wheeled tactical robots, throwable reconnaissance robots, small indoor reconnaissance platforms, quadruped robots ("robodogs"), and other remotely operated unmanned ground systems. Their central value is distance: a robot can allow police to see, hear, communicate, inspect, manipulate, deliver an object, or enter a hazardous location without placing an officer in the same physical space as the subject or hazard. For edged-weapon incidents, that distinction is especially important because a robot does not need to defeat a knife attack physically to be useful; its primary contribution may be to reduce the number of situations in which an officer must approach a knife-armed person at all.

Classification

Police robots are best treated as a specialist resource rather than a less-lethal weapon category, because most police robots are not designed to apply force. Their dominant functions are reconnaissance, bomb and hazardous-device response, communication, tactical observation, remote manipulation, delivery of equipment, search and rescue support, and officer-exposure reduction. Some platforms can potentially be adapted to deliver breaching charges, chemical agents, distraction devices, less-lethal tools, or lethal force, and those uses should be treated separately from ordinary robot deployment.

Main Robot Types

Bomb-disposal / EOD robots

Among the longest-established police robots, EOD platforms are typically tracked or wheeled, comparatively heavy, remotely operated, camera-equipped, and fitted with a manipulator arm. Primary functions include suspicious-device inspection, render-safe procedures, moving hazardous objects, manipulating doors, carrying equipment, and operating where explosive risk makes human approach unsafe. Their use in tactical incidents can extend beyond explosives because the same platform may provide remote video, two-way audio, delivery capability, and limited environmental manipulation.

Tactical reconnaissance robots

Smaller platforms may be sent into buildings, around corners, under vehicles, into crawl spaces, or down hallways before officers enter. Some are small enough to be carried by patrol, thrown through a doorway or window, or quickly deployed during a barricade. Their principal function is information acquisition before human exposure.

Quadruped robots

Quadruped robots are four-legged mobile platforms designed to navigate environments that can be difficult for wheeled robots, including stairs, rubble, uneven ground, industrial sites, and complex interiors. NIJ has identified potential law-enforcement roles including high-risk operations, search and rescue, reconnaissance, hazardous environments, and support to tactical teams. They are generally best understood as mobile sensor platforms, not autonomous police officers.

Communication robots

Some experimental and emerging systems are designed to facilitate remote communication between officers and subjects. Potential roles include crisis negotiation, delivery of instructions, two-way audio and video, communication with barricaded subjects, and maintaining distance during high-risk encounters. The empirical literature here is early.

Mechanism of Benefit

The main mechanism is not incapacitation but risk transfer: instead of sending an officer into an uncertain or dangerous environment, the agency sends a machine. That can create greater stand-off distance, more observation time, better situational awareness, more deliberate planning, lower immediate exposure, and potentially more tactical patience. For a knife-armed subject, this can be highly relevant where the person is barricaded, contained, inside a residence, in a hallway, in an inaccessible room, suicidal but not immediately threatening another person, or otherwise separated from the public. The robot may help answer whether the subject is still armed, where exactly the subject is, whether anyone else is in the room, whether the subject is injured or conscious, whether there are additional weapons, whether communication can be established, and whether officers can maintain containment rather than making entry.

Operational Effectiveness

What is established

Police robots are operationally useful for remote observation, EOD operations, high-risk reconnaissance, hazardous-environment entry, object manipulation, and reducing the need for immediate human approach. NIJ describes law-enforcement robots as capable of transmitting audio and video, climbing or traversing

difficult terrain, opening doors, pushing objects, and providing officers with an initial look at a dangerous scene.

What is not established

There is little strong empirical evidence showing that police robots reduce officer shootings, subject shootings, injury rates, overall force, arrest outcomes, barricade duration, tactical-team entries, or negotiated surrender rates. Those outcomes are plausible but largely unquantified. The current evidence base is much stronger for technical capability and operational utility than for causal public-safety outcomes.

Relevance to Edged-Weapon Encounters

Mechanical quadrupeds as a partial substitute for live K9 exposure

One particularly important potential use of quadruped robots in edged-weapon incidents is as a partial substitute for exposing a living police service dog to a subject armed with a knife or other edged weapon. This should not be framed as a general replacement for police K9s, because current quadruped robots do not reproduce many of the core functions of a trained police dog, including scent tracking, dynamic pursuit, suspect apprehension, biting and holding, independent obstacle negotiation in pursuit, and the highly adaptive interaction between a trained dog and handler. Their strongest potential substitution role is narrower: reconnaissance, communication, close-range observation, and maintaining visual contact where the operational alternative may otherwise involve sending a live K9 or officer into close proximity to an edged-weapon threat.

Live-K9 injury and secondary officer risk

A living police dog can be seriously injured or killed when deployed against a subject armed with an edged weapon, and case histories also suggest a potentially important secondary-risk pathway. When a police dog is stabbed or otherwise seriously injured, the handler may move toward the injured dog, toward the armed subject, or toward both, reducing distance, exposing the handler to the subject's weapon, and creating a new circumstance in which the handler or another officer uses deadly force to protect the handler. The potential sequence is that a live K9 is deployed, the K9 is injured, the handler moves toward the injured dog, handler exposure increases, and a lethal-force confrontation may follow. This should be treated as a case-supported tactical mechanism, not as a quantified epidemiological finding. No published comparative research currently establishes how frequently police dogs are stabbed during edged-weapon encounters, how often handlers move into greater danger to protect an injured dog, how often subsequent officer shootings are connected to that rescue dynamic, or whether using a robot instead of a live K9 would reduce shootings or officer injuries.

Why a mechanical quadruped changes the dynamic

A quadruped robot cannot experience injury, pain, or death in the biological sense. If a knife-armed subject strikes, stabs, knocks over, or disables a robot, the result may be a substantial equipment loss, but it does not create the same immediate rescue imperative as a badly injured living animal. That distinction could allow officers to maintain containment, preserve stand-off distance, avoid entering the subject's effective weapon range, continue negotiation, switch to another observation method, or wait for a safer tactical opportunity. The hypothesized sequence therefore becomes that a mechanical quadruped is deployed, the platform is damaged or disabled, no living animal requires rescue, and officers can potentially maintain distance. This is a strong mechanistic hypothesis, but not yet an empirically demonstrated outcome benefit.

Most plausible edged-weapon use cases

Mechanical quadrupeds are most plausibly useful where the subject is contained or barricaded, officers need visual confirmation before entry, a hallway, room, yard, or confined area is too dangerous for immediate human approach, the operational objective is communication or reconnaissance rather than apprehension, a live K9 would otherwise be considered for close-range visual or area-clearance purposes, and there is enough time to deploy the platform. The substitution argument is much weaker where officers need rapid pursuit, scent tracking, dynamic apprehension, or immediate physical intervention to stop an attack.

Public legitimacy constraint

The tactical advantages of quadruped robots must be considered alongside a significant implementation problem: public acceptance. Research on security robots in public spaces suggests that people may recognize potential safety benefits while simultaneously expressing concern about surveillance, militarization, loss of human accountability, weaponization, autonomous decision-making, and the symbolic presence of robotic policing (Marcu et al., 2023). Quadruped platforms may generate especially strong reactions because their movement and appearance are recognizably animal-like, producing perceptions that can differ from those generated by a conventional wheeled bomb-disposal robot even where the actual technical capabilities are similar. NYPD's original deployment of Boston Dynamics' Spot–publicly nicknamed "Digidog"–illustrated this legitimacy problem, as public and political criticism focused on surveillance, militarization, transparency, and fears of future weaponization, ultimately becoming substantial enough that the department ended the original lease early. A quadruped robot may therefore reduce one form of tactical exposure while simultaneously increasing public concern about surveillance, militarization, and autonomous policing, and the legitimacy cost should be treated as an operational consideration rather than as a purely public-relations issue.

Research implication

This is an unusually strong candidate for future empirical research. A useful research question would be whether, in contained edged-weapon incidents where a live K9 might otherwise be deployed, use of a quadruped robot reduces close-range officer exposure, K9 injury, escalation, or subsequent firearm use. At present, the evidence supports the existence of the live-K9 injury problem, the plausibility of a secondary handler-rescue risk, the technical ability of quadruped robots to perform some reconnaissance functions, and substantial public concern about police robot dogs. It does not yet establish that mechanical K9 substitution improves force, injury, or shooting outcomes.

Strongest use case: contained subject

The strongest knife-related use case is a subject who is armed, contained, not actively attacking a third party, and in an environment where officers would otherwise need to move closer to gather information. A robot can preserve separation while providing intelligence, which may reduce pressure for dynamic entry, close-contact shield approach, immediate hands-on tactics, or premature transition to firearm engagement.

Barricaded subject

A robot may be particularly useful when a knife-armed person is behind a closed door, inside a room, hiding within a residence, or refusing communication. A robot can potentially locate the person, establish communication, assess weapon possession, inspect the environment, and support negotiation.

Suicidal or crisis subject

Where the risk is primarily self-directed and third parties are protected, a robot may help agencies create time and space. Its contribution is indirect: it may reduce the operational necessity for officers to enter the person's immediate reach, though this does not mean the robot itself de-escalates the person.

Active attack

Robots have much less practical value where a knife-armed person is actively stabbing someone, pursuing civilians, moving rapidly through public space, or presenting an immediate deadly threat. Deployment time, mobility, communication latency, and limited ability to physically stop a person make most current ground robots poorly suited as the primary response to an active knife attack.

Robots and Containment

Robots are most valuable when they complement containment. A robot can allow officers to gather information without collapsing distance, and this matters because uncertainty often drives tactical escalation. Without remote observation, officers may feel compelled to approach simply to determine whether the subject remains present, what weapon is held, whether a victim is inside, or whether medical intervention is needed. A robot can reduce that informational pressure. A robot does not itself contain a person merely by

being present, however: unless the platform physically blocks movement, the subject remains capable of leaving, advancing, attacking someone else, or moving out of camera view. The resource provides observation and exposure reduction, not automatic scene control.

Robots and Communication

A robot equipped with two-way audio may allow negotiators, tactical officers, or crisis personnel to communicate without approaching, with potential advantages including reduced officer exposure, continued contact from behind cover, delivery of instructions, and maintaining a communications channel after phone contact fails. Potential disadvantages include mechanical or impersonal presentation, difficulty hearing, subject fear or confusion, poor audio quality, mistrust, or increased agitation. There is not yet strong field evidence showing that robot-mediated communication improves surrender or crisis-resolution rates.

Robots and Force Delivery

A robot used only to observe, communicate, inspect, or carry equipment is not itself a force option. If a robot is used to detonate an explosive near a person, deploy chemical agent, discharge a weapon, strike or pin a subject, or deliver another coercive physical intervention, the underlying action must be analyzed as use of force; the fact that the officer acts remotely does not remove constitutional scrutiny.

Lethal Use

The best-known U.S. example occurred in Dallas in 2016, when police used a remotely controlled bomb-disposal robot carrying an explosive to kill the gunman who had murdered five officers and wounded others. That event demonstrated that an existing EOD platform could be repurposed as a remote lethal-force delivery system, but it did not establish a general doctrine authorizing lethal police robots.

Constitutional framework

Where a human officer deliberately uses a robot to apply deadly force, the relevant constitutional question remains whether deadly force itself was objectively reasonable; the delivery platform does not change the core Fourth Amendment standard. Questions would include whether the subject posed an imminent threat of death or serious bodily injury, whether the force was objectively reasonable under the totality, whether innocent people were exposed, whether the use was remotely controlled, who authorized it, and what degree of force was intended and foreseeable.

Autonomy

There is an important distinction between remote-controlled force, where a human officer makes the force decision, and autonomous force, where software identifies, selects, or engages a person. U.S. case law on

autonomous police lethal-force systems is effectively undeveloped, which should be treated as a major legal and ethical gap.

Less-Lethal Delivery

Robots can theoretically be adapted to deliver chemical agents, distraction devices, breaching charges, restraints, or less-lethal impact systems. The same principle applies in each case: evaluate the intervention according to the force actually delivered, not according to the robot carrying it. A chemical agent delivered by robot remains chemical force; a projectile fired from a robot remains projectile force; and a robot that physically pins or crushes a person raises direct force questions of its own.

Technical Limitations

Robots can fail in ways that matter tactically. Potential limitations include loss of signal, latency, camera blind spots, poor low-light imaging, limited audio, battery life, stairs, doors, clutter, soft surfaces, cables, liquids, damaged flooring, narrow spaces, inability to self-right, and mechanical failure. A robot may provide partial information that appears more complete than it actually is. Like body-worn cameras, robot video should not be assumed to show the full scene; limitations include restricted field of view, camera height, compression, lack of depth perception, occlusion, sensor lag, and operator-selected viewing direction.

Human Factors

Robot effectiveness depends heavily on the operator. Relevant factors include training, interface design, divided attention, communications load, navigation skill, camera interpretation, handoff between operators, and integration with command. A robot can increase information while simultaneously increasing cognitive load. The resource is therefore a human-machine team, not a purely technological solution.

Public Perception

Police robots can generate strong symbolic responses, and public reactions may differ substantially depending on whether the robot is framed as bomb-disposal equipment, rescue technology, surveillance equipment, an armed platform, or an autonomous “police robot.” Research on public-space security robots indicates that people may perceive potential safety benefits while also expressing concerns about surveillance, accountability, autonomy, interaction quality, and militarization. Police-robot legitimacy is therefore likely to depend heavily on purpose, transparency, capability, whether the platform is armed, and whether human decision-making remains clearly identifiable.

Accountability and Responsibility

Remote technology can create a psychological and organizational distance between the person deciding, the machine acting, and the person affected, which makes responsibility rules particularly important. Policy should identify who controls the robot, who authorizes deployment, who may authorize force, who selects payloads, whether autonomous features are enabled, what video and data are retained, and who is responsible for the final decision. The robot should not become a conceptual buffer that obscures human accountability.

U.S. Law

Fourth Amendment searches

Using a robot to enter a constitutionally protected space can raise ordinary Fourth Amendment search questions; a robot does not receive a special exemption simply because no officer physically crosses the threshold. If police could not lawfully enter a home to look around without a warrant, consent, or a recognized exception, sending a camera-equipped robot inside can raise the same or stronger constitutional concerns. The legal question turns on the government search, not on whether the observing agent is human.

Fourth Amendment force

If a robot applies force, ordinary Fourth Amendment force doctrine applies to the human-directed government action.

Warrants and exigency

A tactical robot may be lawfully used during execution of a warrant, exigent circumstances, emergency aid, or other recognized lawful entry. The robot does not independently create authority to enter.

State/local regulation

Some states and municipalities regulate police acquisition or use of military or surveillance equipment. Rules can be significantly more restrictive than the federal constitutional minimum.

San Francisco Example

San Francisco illustrates how contentious force-capable robots can become. In 2022, SFPD proposed a policy that would have permitted potentially lethal robot use in extreme circumstances where the risk of loss of life was imminent and outweighed other force options. The proposal generated substantial public opposition and was sent back for further consideration. The episode is important not because it establishes federal law, but because it demonstrates the policy questions agencies face when an existing reconnaissance and EOD platform can be repurposed to deliver force.

Appropriate Use

Police robots are most defensible where they provide a meaningful safety or information benefit that would otherwise require human exposure. Strong examples include suspicious-device response, hazardous materials, barricaded armed subjects, high-risk building reconnaissance, searching dangerous spaces, locating injured persons, communicating with contained subjects, and delivering equipment into hazardous areas.

Less Appropriate Use

Use becomes harder to justify where ordinary officers can safely perform the task, surveillance is indiscriminate, the platform is deployed mainly for novelty or intimidation, the robot unnecessarily escalates a low-risk encounter, autonomous decision-making exceeds policy, or force capabilities are added without clear authorization and governance.

Evidence Limitations

This is an important evidence-gap resource. There is substantial technical and practitioner literature about what robots can do, but much less rigorous evidence about what happens to policing outcomes when they are used. Major unanswered questions include whether robots reduce officer injury, subject injury, or shootings; whether they reduce dynamic entries or increase successful negotiation; how subjects respond to robot-mediated communication; whether robot deployment increases or decreases perceived police legitimacy; whether quadruped robots create different public reactions from traditional bomb robots; whether remote force lowers the psychological threshold for applying force; and how often robots are used in edged-weapon encounters specifically. The absence of evidence should not be mistaken for evidence of no benefit, but claims that robots “save lives” or “reduce force” should presently be treated as plausible mechanisms, not established population-level effects.

Relevance to Edged-Weapon Encounters

Overall assessment

Potentially high value in contained or barricaded incidents; low value in rapidly mobile attacks. The strongest mechanism is remote information combined with communication and officer stand-off distance, rather than physical control of the knife. Potential benefits include the ability to inspect before entry, confirm weapon status, locate the subject, check for victims, maintain communication, deliver a phone, reduce officer exposure, extend containment, support negotiators, and avoid unnecessary close approach. Limitations include the robot’s inability to disarm the subject or automatically contain movement, its likely inadequacy for active attacks, incomplete camera views, the possibility of subject evasion or disablement, less effective communication than human contact, and the separate legal and ethical issues raised by force-delivery adaptations.

Bottom Line

Police robots are best understood as exposure-reduction and information tools, not as substitute police officers and not ordinarily as force weapons. Their strongest established value is the ability to place cameras, microphones, manipulators, and communication capability into hazardous spaces without placing an officer there. That function is particularly relevant to contained or barricaded edged-weapon incidents, where uncertainty can otherwise drive officers to close distance. The empirical evidence supporting improved injury, force, or shooting outcomes remains weak, however; existing research and NIJ guidance demonstrate technical capability and operational use much more clearly than causal effectiveness. Force-capable robots require separate analysis: once a robot is used to deliver chemical, impact, explosive, or lethal force, the intervention should be evaluated according to the force actually delivered and the human decision authorizing it. Remote operation changes the delivery mechanism; it does not remove constitutional responsibility.

Core Peer-Reviewed Evidence

1. Fan, X., Salehzadeh, R., Korivand, S., Bordbar, F., Cousin, C., Griffin, D. J., & Jalili, N. (2024)
Exploring law enforcement officers' expectations and attitudes about communication robots in police work.
Human Technology, 20(1), 25–44.
DOI: 10.14254/1795-6889.2024.20-1.2 (Fan et al., 2024)

Priority: High / core police-specific human-robot interaction evidence.

Contribution: Examines law-enforcement officers' expectations and attitudes toward communication robots in police work.

Key finding: Demonstrates that successful police-robot adoption depends not only on technical capability but also on officer expectations, perceived usefulness, interaction design, and integration into operational practice.

Strength: Directly studies law-enforcement personnel rather than generic robotics users.

Limitation: Focuses on attitudes and anticipated use rather than measured effects on force, injury, arrest, or crisis resolution.

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2. Salehzadeh, R., et al. (2022)
Public Perception, Privacy, Safety, and Ethical Considerations of Communication Robots in Law Enforcement.
DOI: 10.1109/RO-MAN53752.2022.9900659 (Salehzadeh et al., 2022)

Priority: High / core legitimacy and governance evidence.

Contribution: Examines public perceptions of communication robots in law enforcement, including privacy, safety, and ethical concerns.

Key finding: Police-robot acceptance is shaped by more than operational usefulness; privacy, safety, accountability, and ethical concerns are central to public evaluation.

Strength: Directly addresses law-enforcement robot legitimacy and governance.

Limitation: Perception research does not establish operational effectiveness or causal effects on police outcomes.

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3. Szocik, K., & Smith, B. (2026)
Why police robots will not become human-like: social interaction, machine ethics, and limits of AI.
AI & Society.
DOI: 10.1007/s00146-026-03117-3 (Szocik & Smith, 2026)

Priority: Supporting / conceptual evidence.

Contribution: Examines social-interaction, machine-ethics, and artificial-intelligence limits affecting the prospect of human-like police robots.

Key finding: Highlights important constraints on treating robots as autonomous substitutes for human police judgment and social interaction.

Strength: Useful for defining the conceptual and ethical boundaries of increasingly autonomous police systems.

Limitation: Primarily theoretical; does not measure field effectiveness or use-of-force outcomes.

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4. Mamak, K. (2023)
How Should the Law Treat Attacks on Police Robots?
DOI: 10.3233/FAIA220662 (Mamak, 2023)

Priority: Supporting / legal-conceptual evidence.

Contribution: Examines how law should conceptualize attacks on police robots and the legal status of robotic police technologies.

Key finding: Demonstrates that police robots create unresolved legal questions that cannot always be answered by treating the machine as either ordinary property or a human officer.

Strength: Useful for identifying emerging legal issues associated with robotic policing.

Limitation: Does not provide empirical evidence on operational performance, force reduction, or safety outcomes.

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5. Marcu, G., et al. (2023)

Public Perceptions of Security Robots in Public Spaces.

DOI: 10.1145/3610171 (Marcu et al., 2023)

Priority: High / core public-perception evidence for robot deployment.

Contribution: Examines public perceptions of security robots operating in public spaces.

Key finding: People can perceive safety benefits while simultaneously expressing concerns about surveillance, autonomy, accountability, and the social implications of robotic security.

Strength: Directly relevant to the legitimacy problem surrounding conspicuous quadruped and security-robot deployment.

Limitation: Security-robot perceptions are not identical to attitudes toward police quadrupeds in high-risk incidents and do not establish operational outcomes.

Key Government / Practitioner Sources

1. National Institute of Justice. (2024)

Quadruped Robots for Law Enforcement Applications. NCJ 310473.

Priority: Essential / highest-value U.S. government technology overview.

Contribution: Reviews quadruped robot technology, law-enforcement applications, operational considerations, and community concerns.

Key finding: Quadruped platforms can support reconnaissance, hazardous-environment operations, search and rescue, and tactical missions where sending an officer may create unnecessary exposure.

Strength: Directly focused on U.S. law-enforcement applications.

Limitation: Technology/practitioner guidance rather than a controlled outcome evaluation.

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2. National Institute of Justice. (2014)

Teaming Up for Law Enforcement Robotics.

Priority: High / foundational practitioner source.

Contribution: Describes EOD, tactical, and micro-robot capabilities including audio/video reconnaissance, mobility, and manipulation.

Key finding: Ground robots can extend police observation and manipulation capability into hazardous spaces without immediate human entry.

Strength: Useful operational overview of established police-robot roles.

Limitation: Does not establish reductions in force, shootings, or injury.

Evidence Rating

Technical capability: ★★★★☆
Strong technical and practitioner evidence supports reconnaissance, manipulation, communication, and hazardous-environment functions, although capability varies greatly by platform and terrain.

Operational utility: ★★★☆☆
Robots are clearly useful in EOD and selected high-risk operations, but comparative evidence demonstrating improved police outcomes remains limited.

Evidence of reduced officer exposure: ★★★☆☆
The exposure-reduction mechanism is strong because machines can enter hazardous spaces in place of officers, but direct comparative field evidence remains sparse.

Evidence of reduced force or injury: ★☆☆☆☆
There is little rigorous evidence that police robot deployment reduces shootings, overall force, officer injury, or subject injury.

Evidence specific to edged weapons: ★☆☆☆☆
The proposed benefits for contained knife incidents, including possible substitution for some live-K9 exposure, are plausible but essentially untested.

Public-perception evidence: ★★☆☆☆
A developing literature identifies surveillance, militarization, autonomy, and accountability concerns, but police-quadruped-specific evidence remains limited.

Legal certainty for ordinary reconnaissance: ★★★☆☆
Traditional Fourth Amendment principles provide a workable framework for many reconnaissance uses, but application depends heavily on location, entry authority, and surveillance scope.

Legal certainty for autonomous or force-capable robots: ★☆☆☆☆
U.S. law and empirical practice remain highly undeveloped for autonomous targeting, force delivery, and weaponized police robots.

Overall confidence: Low-to-moderate.

Research-library conclusion

Police ground robots are best supported as specialist reconnaissance, communication, manipulation, and officer-exposure-reduction tools. Their strongest evidence concerns technical capability and established EOD or hazardous-environment utility, not causal reductions in force, injury, or shootings. For edged-weapon encounters, the most plausible benefit is preserving distance during contained or barricaded incidents by sending a machine into a close-range hazard instead of an officer or, in some circumstances, a living police dog. The mechanical-K9 substitution hypothesis is operationally compelling but presently untested. Public acceptance is also a meaningful constraint: conspicuous quadruped platforms can trigger concerns about surveillance, militarization, autonomy, and weaponization that are less pronounced with conventional bomb robots. Force-capable and autonomous systems therefore require substantially more evidence and clearer governance than ordinary remotely operated reconnaissance platforms.

Evidence Gaps

- No strong U.S. field experiment comparing robot deployment versus no robot deployment in high-risk police incidents.
- No reliable estimate of shootings prevented by police robots.
- No comparative study of robot-assisted versus officer-entry outcomes in knife incidents.
- No established empirical evidence that robot-mediated negotiation improves surrender rates.
- No mature U.S. case law governing autonomous police use of force.
- Sparse evidence on how robot appearance–tracked EOD platform versus quadruped–affects subject behaviour or public legitimacy.
- No comparative research on live K9 versus quadruped-robot deployment in edged-weapon incidents, including K9 injury, handler exposure, escalation, or firearm-use outcomes.

References

Fan, X., Salehzadeh, R., Korivand, S., Bordbar, F., Cousin, C., Griffin, D. J., & Jalili, N. (2024). Exploring law enforcement officers' expectations and attitudes about communication robots in police work. *Human Technology*, *20*(1), 25–44. https://doi.org/10.14254/1795-6889.2024.20-1.2

Mamak, K. (2023). How Should the Law Treat Attacks on Police Robots? In Hakli, R., Mäkelä, P., & Seibt, J. (Eds.), *Frontiers in Artificial Intelligence and Applications*. IOS Press. https://doi.org/10.3233/FAIA220662

Marcu, G., Lin, I., Williams, B., Robert, L. P., & Schaub, F. (2023). “Would i Feel More Secure With a Robot?”: Understanding Perceptions of Security Robots in Public Spaces. *Proceedings of the ACM on Human-Computer Interaction*, *7*(CSCW2), 1–34. https://doi.org/10.1145/3610171

Salehzadeh, R., Bordbar, F., Griffin, D. J., Cousin, C., & Jalili, N. (2022). Public Perception, Privacy, Safety, and Ethical Considerations of Communication Robots in Law Enforcement. In *2022 31st ieee International Conference on Robot and Human Interactive Communication (ro-man)* (pp. 1586–1591). IEEE. https://doi.org/10.1109/RO-MAN53752.2022.9900659

Szocik, K., & Smith, B. (2026). Why police robots will not become human-like: social interaction, machine ethics, and limits of ai. *AI & SOCIETY*, *41*(9), 8341–8348. https://doi.org/10.1007/s00146-026-03117-3

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