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**NAVAL
POSTGRADUATE
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MONTEREY, CALIFORNIA

THESIS

**ETHICS ON THE FLY: TOWARD A DRONE-SPECIFIC
CODE OF CONDUCT FOR LAW ENFORCEMENT**

by

Brian T. Smith

March 2016

Thesis Co-Advisors:

Kathleen Kiernan
Rob Nelson

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**ETHICS ON THE FLY: TOWARD A DRONE-SPECIFIC CODE OF CONDUCT
FOR LAW ENFORCEMENT**

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Submitted in partial fulfillment of the
requirements for the degree of

**MASTER OF ARTS IN SECURITY STUDIES
(HOMELAND SECURITY AND DEFENSE)**

from the

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ABSTRACT

This thesis examines the issue of law enforcement's use of unmanned aerial systems (UAS) from an ethical perspective. As UAS have only recently been introduced into the National Airspace System (NAS), legislation regarding their use in America's skies is lacking. This dearth of statutory guidelines creates a circumstance wherein self-imposed limits on UAS use by law enforcement take on greater importance.

The primary research question posed by this thesis is whether a prevailing ethical framework exists to govern the use of UAS by domestic law enforcement functions. It concluded no consensus exists. Using the case study method, this thesis considered documentary evidence of ethical frameworks for UAS currently in use by law enforcement. A comparative policy analysis is then performed to identify overlapping areas of concern, in order to arrive at a template that recommends seven dimensions that law enforcement executives should consider in creating a drone-specific code of conduct for policing. A case is made for publicly declaring an agency's code of conduct in the interest of strengthening the relationship between police and the public vis-à-vis the social contract.

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LIST OF ACRONYMS AND ABBREVIATIONS

ACLU	American Civil Liberties Union
AUVSI	Association of Unmanned Vehicle Systems International
COA	certificate of waiver authorization
CRS	Congressional Research Service
DOD	Department of Defense
DOJ	Department of Justice
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
GPS	Global Positioning System
IACP	International Association of Chiefs of Police
MCSO	Mesa County Sheriff's Office
NAS	National Airspace System
NSA	National Security Agency
UAS	unmanned aerial systems

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EXECUTIVE SUMMARY

This thesis examines the issue of law enforcement's use of unmanned aerial systems (UAS) from an ethical perspective. It describes ethics as rules governing individual conduct that are functionally specific, relating to the role one plays in society. The role police play in U.S. communities and the ethical frameworks they use to guide their conduct have a great impact in defining the relationship between the people and their government in the American context, colored as it is by the social contract and the idea, enshrined in the Declaration of Independence, that the legitimacy of any government is derived from the consent of the governed.¹

Empowered to enforce the laws by which society has corporately agreed to be governed, police have a unique ethical relationship to the law. For an action to be ethical for police to take, it must first be legal. The law is a necessary deontological reference point for officers and agencies in defining right and wrong conduct. Unfortunately, in the current environment, legislation governing UAS use by police agencies is lacking. This circumstance creates a referential void for law enforcement executives seeking to put drone technology to use in service of the public.

From a homeland security perspective, public safety stands to be greatly enhanced by the fielding of these versatile platforms. UAS will allow law enforcement agencies without manned aviation units to realize gains in situational awareness, crime scene investigation, accident investigation, search and rescue operations, warrant service, and tactical operations. At issue is how to put the technology to use in these legitimate public safety missions in a way that adequately addresses the privacy and other concerns that accompany any discussion about domestic drone use by government. It is imperative that these issues be considered if public support for law enforcement UAS deployment is to

¹ Thomas Jefferson, "Declaration of Independence," U.S. Government National Archives. July 4, 1776, http://www.archives.gov/exhibits/charters/declaration_transcript.html.

be secured.² Yet, at present, the discussion about the ethics of UAS employment for law enforcement purposes is nearly absent from the literature. This research seeks to help fill that void.

The primary research question posed by this thesis is whether a prevailing ethical framework exists to govern the use of UAS for domestic law enforcement functions. This thesis concluded that no such consensus exists. Indeed, this research found no single set of ethical guidelines is available to which all American police agencies subscribe. Rather, state and local law enforcement in the United States is fragmented, which results in a lack of standardization regarding ethical norms. With over 18,000 law enforcement agencies nationwide,³ law enforcement in the United States is far from a unitary project. Whether by accident or by design, this circumstance allows agencies to be responsive to local and regional concerns with regard to the ethics of policing. As a secondary research question, this thesis considers what ethical frameworks might be applied to this problem through an examination of the emerging literature.

A hybrid research methodology using elements of the case study method, as well as a policy analysis section, are used in developing this thesis. Using the case study method, it examines evidence of ethical frameworks currently in use by domestic law enforcement agencies. The evidence considered is largely documentary and considered against the ethical standards society expects of law enforcement. Once described, a comparative policy analysis is performed to identify any overlapping areas of concern that appear to be held in common. This study identified seven common dimensions of ethical concern regarding UAS employment:

² International Association of Chiefs of Police, *Recommended Guidelines for the Use of Unmanned Aircraft* (Alexandria, VA: International Association of Chiefs of Police, 2012), 1, http://www.theiacp.org/portals/0/pdfs/iacp_uaguidelines.pdf.

³ Gary Corder and Kathryn Scarborough, "Information Sharing: Exploring the Intersection of Policing with National and Military Intelligence," *Homeland Security Affairs* 6, no. 1 (January 2010), 113.

- engagement
- accountability
- transparency
- privacy
- legality
- use of force
- safety

This thesis recommends that agencies currently using or preparing to use UAS for law enforcement missions address these dimensions in a drone-specific code of conduct, both to guide decision making for officers in the field and to inform the public regarding the uses and limitations of these increasingly capable public safety tools. Further, this thesis recommends the code of conduct be made available for public review and that it be considered a *living document* that is expected to change over time. Public opinion is not static; society's expectations are subject to refinement over time. It is in this light, possessing a capacity for change, that the code of conduct should be understood when considering drones and their place alongside other tools employed in law enforcement missions.

Of the more than 18,000 law enforcement agencies in the United States,⁴ only 20 agencies have a certificate of waiver authorization with the Federal Aviation Administration to operate drones.⁵ Accordingly, very little experience exists from which to draw regarding what acceptable and unacceptable conduct looks like in law enforcement's use of drones. UAS use by police is just one facet of an ever-broadening debate in this country about the costs of security in the modern world. The debate about police use of drones is a debate about the future of policing. Law enforcement agencies are uniquely positioned at this moment to lead that conversation, demonstrating that drone technology can

⁴ Cordner and Scarborough, "Information Sharing," 113.

⁵ "Freedom of Information Act Responses," last modified November 3, 2015, http://www.faa.gov/uas/public_operations/foia_responses/.

contribute to this nation's collective security in a way consistent with American principles and that maintains the consent of the governed.

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I. INTRODUCTION

This thesis examines the ethical use of unmanned aerial systems (UAS) by law enforcement agencies in the United States. In particular, it focuses on the ethical frameworks used by those agencies that currently deploy UAS for law enforcement purposes, describes those frameworks in evidence, and considers whether these frameworks are adequate.

Commonly called “drones,” UAS are not new technology, having been in use in one form or another since 1915.¹ Department of Defense (DOD) employment of drones and the missions for which UAS are used overseas have been well-documented in the media. Their battlefield successes in America’s recent wars have led to a proliferation of these systems as mission capabilities have grown. With a worldwide market projected to be worth almost \$91 billion in the next decade,² conditions are ripe for the technology’s adoption in a host of emerging domestic market areas, including law enforcement. From a homeland security perspective, public safety stands to be greatly enhanced by the fielding of these versatile platforms, allowing law enforcement agencies to realize gains in situational awareness, crime scene investigation, accident investigation, search and rescue operations, warrant service, and tactical operations. At issue is how to put the technology to use in these legitimate public safety missions in a way that adequately addresses the privacy and other concerns that accompany any discussion about domestic drone use by government. It is imperative that these concerns be considered if public support for law enforcement UAS deployment is to be secured.³

¹ Rachel L. Finn and David Wright, “Unmanned Aircraft Systems: Surveillance, Ethics and Privacy in Civil Applications,” *Computer Law and Security Review*, no. 28 (2012): 185.

² “Teal Group Predicts Worldwide UAV Market Will Total \$91 Billion in Its 2014 UAV Market Profile and Forecast,” July 17, 2014, <http://www.tealgroup.com/index.php/about-teal-group-corporation/press-releases/118-2014-uav-press-release>.

³ International Association of Chiefs of Police, *Recommended Guidelines for the Use of Unmanned Aircraft* (Alexandria, VA: International Association of Chiefs of Police, 2012), 1, http://www.theiacp.org/portals/0/pdfs/iacp_uaguidelines.pdf.

In this instance, as in most contested issues, context matters. The discussion in the United States regarding the place of drones in U.S. society is happening against the backdrop of debates about the “rightness” or “wrongness” of government conduct in a number of spheres. The drone-executed extrajudicial killing of American citizens abroad in this country’s ongoing war against terrorist organizations, the extent of the National Security Agency’s (NSA) surveillance programs as revealed by the Edward Snowden revelations, and heated debates about the use of lethal force by police set off by incidents in Ferguson, Missouri, and Baltimore, Maryland,⁴ are three issues that have added to the debate about ethical governmental action impacting citizens’ lives. How far is too far in the pursuit of security? What are the limits of governmental authority within the social contract?

Another issue that is central to the debate about reasonable drone use in the domestic arena is the changing concept of privacy in America that has accompanied the growing importance of technology, especially the Internet and social media, in everyone’s lives. The right to privacy, although not specifically mentioned in the Constitution, is largely believed to be inferred by the First, Fourth and Fifth Amendments.⁵ The concept of privacy is central to the discussion about drone use by authorities in the American context, owing to its pivotal role in the relationship between the government and the governed. These issues create the landscape upon which this country approaches the question of how a disruptive technology, such as UAS, should be employed by government in the domestic arena.

A. PROBLEM SPACE

Thus, the concept of using UAS for domestic law enforcement purposes is at one time both promising and incredibly problematic. The technology is promising for the capabilities that it puts within reach of even small, local law

⁴ *The Economist*, “The Cross Blue Line,” September 12, 2015, 33.

⁵ “Right of Privacy: An Overview,” accessed September 21, 2015, <https://www.law.cornell.edu/wex/Privacy>.

enforcement agencies. It is problematic for the potential for abuse that accompanies the prospect of cheap, nearly undetectable surveillance methods that could soon be within reach of every police department or sheriff's office in the country. Yet, the discussion about the ethics of UAS employment for law enforcement purposes is nearly absent from the literature. This research seeks to help fill that void.

The absence of clearly defined ethical frames for drone use represents both a policy dilemma and a knowledge gap. The policy dilemma stems from the fact that the technology is out in front of the regulation. In February 2015, the Federal Aviation Administration (FAA) met a congressionally-mandated deadline to provide guidelines for integrating UAS in the National Airspace System (NAS) with its Small UAS Notice of Proposed Rulemaking.⁶ Prior to the notice, a handful of agencies were already operating drones in U.S. airspace through the FAA's waiver program.⁷ While the proposed rules are a start, they only apply to drones weighing less than 55 pounds and are primarily meant to deal with safety considerations, such as separation of drones from manned aviation. Absent broader federal legislation governing UAS use, a patchwork of state legislation is emerging with 20 states having passed laws specifically addressing UAS employment within their respective jurisdictions.⁸ These laws often vary greatly, which has led to inconsistencies from one jurisdiction to the next in how and when drones may be flown in the nation's airspace. As the list of agencies seeking to use drones expands, the need for policy guidance and decision-making frameworks will grow; yet, it is clear that legislation will only go so far.

⁶ "Small UAS Notice of Proposed Rulemaking," February 15, 2015, <http://www.faa.gov/uas/nprm/>.

⁷ John A. Wallace, "Integrating Unmanned Aircraft Systems into Modern Policing in an Urban Environment" (master's thesis, Naval Postgraduate School, 2012), 9, <http://www.hsdl.org/?view&did=725881>.

⁸ Rich Williams, "Current Unmanned Aircraft State Law Landscape," *National Conference of State Legislatures*, December 29, 2014, <http://www.ncsl.org/research/civil-and-criminal-justice/current-uas-state-law-landscape.aspx>.

The author proposes that adopting ethical use policies regarding UAS employment at the agency level can help address legislative shortfalls.

The knowledge gap concerning drones exists as a result of the lack of domestic experience with this technology, owing to the fact that it is in the very early stages of adoption for anything beyond recreational purposes. The publishing of the FAA notice will likely result in changes, although the rules only address certain safety aspects of drone flight and leave the social context to be discovered. Finn and Wright point out drones are well-suited to “dull, dirty and dangerous work,”⁹ a fact that makes them extremely useful in a number of missions common to both military and law enforcement. However, military experience with the technology far outpaces that of law enforcement agencies. Care must be taken such that decision-making frameworks historically used for DOD missions do not come to supplant those that should be used in domestic law enforcement missions, as the context is completely different. What is ethical on the battlefield may not be so in the domestic arena. Clear guidelines defining “right” and “wrong” conduct are needed at the outset to squelch the potential for abuse and keep the law enforcement missions for which UAS will be employed within boundaries that will prove acceptable within the judicial system and to the American public.

The need for boundaries is clear, yet a review of the current literature concerning drones reveals that little has been written regarding the intersection of ethics and UAS employment for law enforcement purposes. Investigating and describing the ethical frameworks being applied to the use of this disruptive technology could be instructive for agencies considering adopting these systems, as well as for policy makers considering how to govern those agencies that will ultimately put them to use. This thesis hopes to discover what ethical frameworks are being applied in the decision-making process for UAS deployment by law enforcement and what form they take. It describes those frameworks, and

⁹ Rachel L. Finn and David Wright, “Unmanned Aircraft Systems: Surveillance, Ethics and Privacy in Civil Applications,” *Computer Law and Security Review*, no. 28 (2012): 186.

drawing from the best of each, proposes a list of issues to be considered by police executives before fielding UAS in law enforcement missions in the United States.

B. ETHICS PRIMER

Any discourse concerning ethics requires at the outset an explanation of the terms involved, as they are often understood differently by everyone. The description that follows is not intended to be authoritative, but to give the reader a common frame of reference for understanding the concepts that are foundational to this thesis.

Ethics, also known as moral philosophy, is concerned with “systematizing, defending, and recommending concepts of right and wrong behavior.”¹⁰ The subject is commonly subdivided into three spheres of study: meta-ethics, normative ethics, and applied ethics.¹¹ Meta-ethics investigates the nature of moral reasoning.¹² It seeks to answer questions, such as Where do we get our standards of right and wrong? Are these standards universal or relative? What kind of person should I be? Normative ethics seeks to provide procedures to guide people in defining right and wrong conduct and relies heavily on theories that seek to define *by what criteria* the “rightness” of an action is decided. These criteria are often described in terms of the agent taking the action (virtue ethics), the action itself (deontology), or the outcomes of the action taken (consequentialism).¹³ Applied ethics is concerned with applying ethical principles to a particular situation, dilemma, or field of endeavor.¹⁴ Bioethics and business ethics are two commonly recognized areas of applied ethical study. Although

¹⁰ James Fieser, “Ethics,” Internet Encyclopedia of Philosophy, accessed September 20, 2015, <http://www.iep.utm.edu/ethics/>.

¹¹ Ibid.

¹² Robert Cavalier, “Online Guide to Ethics and Moral Philosophy: Meta-Ethics, Normative Ethics, and Applied Ethics,” Carnegie Mellon University, 2002, http://www.phil.cmu.edu/Cavalier/80130/part2/II_preface.html.

¹³ Ibid.

¹⁴ Ibid.

neatly compartmentalized in this description, Fieser notes that the lines between these three areas of ethical study are often blurry. Questions of right conduct in the applied realm draw on normative principles, which in turn, depend on big picture meta-ethical concepts.

Normative ethics is generally understood as divided into three general approaches: consequentialism, deontology, and virtue ethics. These approaches differ according to whether the *agent*, the *action* or the *outcome* is considered to be the main criterion for judging conduct as either “right” or “wrong.” Consequentialist normative theories stress the importance of the outcome of any action. An act that produces a positive outcome is, from a consequentialist point of view, necessarily good. Utilitarian ethical frames are considered a subset of consequentialism, and generally hold that “the morally right action is the action that produces the most good.”¹⁵ Jeremy Bentham and John Stuart Mill are two philosophers frequently associated with utilitarianism.

Deontological ethical theories stress the importance of the act itself in judging conduct as either right or wrong. It requires adherence to and an understanding of certain moral laws or duties,¹⁶ and the intention to comply with those standards. Judging whether an action is “right” is completely independent of how much “good” it produces. Therefore, deontology is widely viewed as the opposite of consequentialism. Immanuel Kant, Thomas Hobbes, and John Locke are commonly associated with deontological thought.

Virtue ethics is the normative approach that “emphasizes the virtues or moral character” of the agent.¹⁷ This approach stresses the motives, character, wisdom, education, relationships and emotions of the actor and seeks to answer questions about how people should live and what sort of person individuals

¹⁵ Julia Driver, “Stanford Encyclopedia of Philosophy, The History of Utilitarianism,” September 22, 2014, <http://plato.stanford.edu/entries/utilitarianism-history/>.

¹⁶ Robert Cavalier, “Online Guide to Ethics and Moral Philosophy: Deontological Theories,” Carnegie Mellon University, 2002, <http://www.phil.cmu.edu/Cavalier/80130/part2/sect8.html>.

¹⁷ Rosalind Hursthouse, *On Virtue Ethics* (New York, NY: Oxford University Press, 1999), 1.

should seek to be.¹⁸ Hursthouse points out that virtues should not be thought of as absolutes, but as something possessed in degrees.¹⁹ Out of favor among normative theories for quite some time, virtue ethics has seen resurgence in recent decades, signaling a return to an ethical approach rooted heavily in the teachings of Plato and Aristotle.²⁰

Given the recent focus on discerning right and wrong conduct undertaken by the government both at home and abroad, it makes perfect sense to study the intersection of ethics and police work, regardless of which normative approach someone favors. Cohen and Feldberg observed that the moral dimensions of police work are inescapable, as police make daily decisions that may “have great impact on those of us on the receiving end of police services.”²¹ Gleason also posits that police officers are rightly held to a higher standard than the public-at-large “because they are stewards of the public trust and are empowered to apply force and remove constitutional privileges when lawfully justified.”²² Police officers may make decisions concerning whether to seize property, deprive individuals of their liberty, or use deadly force all in a single shift. Perhaps no other profession in America is entrusted with more power in the domestic arena than that of the police.²³ The impact of this trust and the types of ethical codes put into practice by law enforcement in the United States is dealt with in detail in Chapter II.

¹⁸ “Virtue Ethics,” 2012, <http://plato.stanford.edu/entries/ethics-virtue/>.

¹⁹ Ibid.

²⁰ Hursthouse, *On Virtue Ethics*, 3.

²¹ Howard S. Cohen and Michael Feldberg, *Power and Restraint: The Moral Dimension of Police Work* (Westport, CT: Praeger Publishers, 1991), 3.

²² Tag Gleason, “Ethics Training for Police,” *The Police Chief*, November 2006, http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=display_arch&article_id=1054&issue_id=112006.

²³ Arguments about whether policing is to be considered a “profession” will be set aside as beyond the scope of this thesis. For further reading on the distinction and its relationship to the police function, see Johan Prinsloo and Brian Kingshot, “Ethics in Policing,” *Phronimon* 5, no. 1 (2004): 49–70.

C. RESEARCH QUESTIONS

Does a prevailing ethical framework exist that governs the use of UAS for domestic law enforcement functions? If so, is it adequate? If not, which ethical decision-making frameworks might be applied to this problem?

This author's hypothesis is that agencies currently using or have used drones for law enforcement purposes do so within the ethical constraints they use for other technical tools they employ. Some, such as wiretaps, must be actively pursued. Others, such as video surveillance, may be passive in nature. Some tools require a warrant prior to use, others do not. Video surveillance cameras, telephone wiretaps, global positioning system (GPS) tracking devices, radar/laser speed detectors, and even manned aircraft were all new to policing at some point in the past but are now considered standard "tools of the trade." As the legality of these tools has become well-defined over time, the limits of their ethical employment in policing are now mostly clear, as police actions must themselves always be *legal* to be ethical.²⁴ Drone use standards do not yet benefit from the wealth of case law applied to these other technical means available to law enforcement and it may be years before precisely *how* agencies may employ drones is decided by the courts. Nevertheless, drones are now part of everyday life, and guidelines for their use within the bounds of the social contract cannot wait, as the technology is poised like no other that has come before to alter the relationship between the people and their government. As Kleinig makes clear, police often "represent for many citizens the most immediate and visible expression of governmental authority and power."²⁵ How police employ this new tool in their toolbox will undoubtedly have an effect on how citizens view their government.

²⁴ This concept is spelled out in Articles 2 and 4 of "Canons of Police Ethics," first published by the National Institute of Justice in 1957. For further reading, see Yurong Zhang and John Kleinig, ed. *Professional Law Enforcement Codes: A Documentary Collection* (Westport, CT: Greenwood Press, 1993), 91–96.

²⁵ John Kleinig, *The Ethics of Policing* (Cambridge, UK: Cambridge University Press, 1996), 13.

D. DATA SOURCES AND METHOD

Data for this research comes from publicly available documents regarding law enforcement agencies that have employed or have sought to employ UAS within U.S. airspace. Sources include law enforcement agency websites and those of their parent organizations, online resources including news media reports regarding drone use by particular agencies, and federal government disclosures regarding public entities that have a certificate of waiver authorization (COA) on file with the FAA.

As of February 7, 2016, the FAA had 74 COAs on file for public (government) UAS operations.²⁶ Of those, at least 20 are law enforcement entities of some type: federal, state, local or tribal. The COA packages, which are available for review on the FAA's website, include a wealth of information regarding the operating areas and parameters, as well as the type of drone employed by those agencies. The information disclosed is useful to the research, as it not only describes in some cases the missions for which a particular UAS will be employed, but identifies the type of drone in use. This disclosure often provides insight into the capabilities of each platform.

The COA packages only tell part of the story, however. To discern the ethical frame from which each agency operates, the home pages of the law enforcement agencies themselves can prove useful. Transparency efforts that pre-date drone use have led many agencies to provide values statements, codes of conduct, or codes of ethics on agency or local government websites. These references are instructive as they provide insight into how an agency views itself and its relationship to the community that it serves. For insight into how the community views this relationship, media reports on the topic of UAS operations are also instructive. In some jurisdictions, such as Seattle, Washington, the issue of drone use in law enforcement has been closely followed by local papers and television news programs as a contentious one.

²⁶ "Unmanned Aircraft Systems, Freedom of Information Act Responses," February 25, 2015, https://www.faa.gov/uas/public_operations/foia_responses/.

1. Types of Analysis

A hybrid research methodology using elements of the case study method, as well as a policy analysis section, is used in developing this thesis. The case study method examines evidence of ethical frameworks currently in use by domestic law enforcement agencies. The evidence considered is largely documentary and considered against the ethical standards society expects of law enforcement, and just as importantly, the standards law enforcement expects of itself. Once described, a comparative policy analysis is performed to identify any overlapping areas of concern that appear to be held in common. Based on these common areas of concern, a template is developed outlining ethical dimensions that should be addressed in creating a drone-specific code of conduct for law enforcement.

2. Limits

Choosing a study group from among the relatively small number of agencies that have progressed to the COA stage helped to define the scope of this study. The information required to submit an FAA waiver package necessarily requires that a substantial amount of thought has already been given to the intended uses and limitations the applicant agency intends for its particular system. Thus, the contents of the package are largely representative of policy, indicative of the framework for decision making prior to the deployment of a drone, and not mere conjecture on the part of some law enforcement executive regarding the hypothetical use of aerial systems that agencies may adopt in the future.

This thesis does not study legislation in any great detail. A section on law, regulation, and policy is included as part of the literature review. Where relevant, case law is mentioned as it helps to define the legal baseline from which police methods of surveillance are understood to operate. As previously stated, several articles included in the *Canons of Police Ethics* (1957) lend credence to the position that the *legality* of a behavior is a good starting point for beginning to

judge whether police actions are *ethical*; however, the intent of this thesis is not to investigate or dissect legal constraints, as these constraints are largely absent at present.

3. Output

The ultimate goal of this thesis is, at its heart, to test whether the policies governing UAS deployment adopted by the domestic law enforcement agencies themselves are adequate or need improvement. To accomplish this goal, the output of this research consists of two parts. The first output is a description of the ethical frameworks identified currently in use by agencies employing UAS. The second output is a list of ethical dimensions, drawn from the different ethical frameworks in use, which any agency intending to employ UAS should address in a drone-specific code of conduct to govern the use of the technology in law enforcement missions.

E. LITERATURE REVIEW

As this topic has appeared relatively recently in the public consciousness, the majority of the literature dealing specifically with UAS is relatively new, with most sources being published within the past seven years. The pace of scholarship is accelerating, however, and includes sources from several documentary categories including government reports and testimony, proposed and passed legislation, scholarly journal articles, academic theses, educational websites, professional organization and special interest advocacy papers, as well as media coverage in print and online. The source material can be generally divided into the following sub-literatures:

- ethics in policing
- law, regulation and policy
- UAS operations
- privacy concerns

The literature concerning UAS employment in the domestic arena is growing quickly but is still outstripped by the amount of thought that has been given to wartime use of UAS overseas. Consequently, a good deal of the literature related to UAS use is derived from the experiences of the DOD and the Central Intelligence Agency (CIA). That literature serves as the starting point for much of the discourse regarding platform capabilities impacting the domestic use of UAS. Much of the discussion about capabilities centers on previously mentioned privacy concerns. Sources include academic research, as well as advocacy papers on both sides of the debate, including from industry organizations and civil liberties groups.

The sources for this literature review may be organized into the following documentary categories:

- government reports and testimony
- scholarly journal articles
- educational websites and papers
- professional/special interest organization position papers and websites
- media reports and news articles

These sources represent a diverse array of academic, government and special interest research. The broad variation in authorship reflects the growing interest in the general issue of domestic UAS deployment across a broad spectrum of stakeholders. These stakeholders include potential business and law enforcement users seeking capability expansion at reduced cost, as well as privacy advocates concerned with the virtually limitless potential of UAS to erode the public's expectation of privacy. All recognize UAS as a transformative technology with the potential to change the landscape of domestic law enforcement that adds to capabilities while simultaneously holding a vast potential for abuse.

1. Ethics and Policing

Ethical codes have long been a fixture in everyday life. The Hippocratic Oath is perhaps most familiar and dates to at least the 3rd century B.C. Historically, codes of ethics have been associated with the fields of law, medicine, and theology. Palin states that these fields of endeavor were “distinguished from other occupations by three common characteristics: an extended period of education; a self-sacrificing commitment to serving society; and freedom to self-organize and self-regulate.”²⁷ Carr would add that the primary distinguishing characteristic of a profession is that standards of service are “morally grounded,” and expressed as duties or obligations.²⁸ This obligation stems from the fact that the services provided are not ones that the “customers” could provide for themselves.

According to Kleinig and Zhang, it is only in the last century that ethical codes have assumed a more prominent role in society as they have proliferated beyond the traditionally held “professions” and are now generally understood to set down “a wide range of commitments intended to mediate the formal relations between providers of.....services and their recipients.”²⁹ Endeavors as diverse as business, banking, architecture, and policing, to name just a few have begun adopting a code of ethics to enforce institutional standards. These codes differ substantially in specifics, as they address the particular services provided, but in all cases, such codes serve to protect the “consumers” served.³⁰ Adopting such standards improves the public perception of the service provider individually and corporately. According to Prinsloo and Kingshot, the adoption of a formal code of

²⁷ Philip J. Palin, “Homeland Security: An Aristotelian Approach to Professional Development,” *Homeland Security Affairs* 6, no. 2 (May 2010), <https://www.hsaj.org/articles/677>.

²⁸ David Carr, “Education, Profession and Culture: Some Conceptual Questions,” *British Journal of Educational Studies* 48, no. 3 (September 2000): 248, <http://onlinelibrary.wiley.com/doi/10.1111/1467-8527.00146/epdf>.

²⁹ Kleinig and Zhang, *Professional Law Enforcement Codes: A Documentary Collection*, 1.

³⁰ Johan and Kingshot, “Ethics in Policing,” 53.

ethics among police agencies brings with it benefits that lead to gains in police efficiency, value, and effectiveness.³¹

Gilman observes that, far from being simple aspirational statements, codes of ethics are “some of the most important statements of civic expectation.”³² He posits that effective codes function simultaneously on both an *institutional* and a *symbolic* level. Institutionally, they define boundaries and expectations for behavior. They show individuals where the pitfalls are so they can be avoided. Symbolically, codes create a model to which individuals subscribe that defines not only how they see themselves but how they desire others to see them.

Foundational literature on modern police ethics begins in 1829 with the adoption of the Metropolitan Police Act by the British Parliament.³³ Widely considered to mark the beginning of modern professional policing, this Act established the Metropolitan Police in London. The Act included a code of general instructions that encompassed nine principles of behavior demanded of new police officers. These instructions codified standards of behavior for the new officers, both on and off duty. Literature specific to policing in the United States begins at least as early as 1957 with the publishing of the *Canons of Police Ethics* by the International Association of Chiefs of Police (IACP).³⁴ Concepts, such as integrity, discretion, confidentiality, and impartiality are all mentioned. Just as in the general instructions found in the Metropolitan Police Act, off duty behavior is included in the IACP code. Thus, a consensus seems to have been reached that private behavior impacts on credibility in professional conduct, at least as it relates to the police.

³¹ Johan and Kingshot, “Ethics in Policing,” 52.

³² Ibid.

³³ “Metropolitan Police,” 2015, <http://www.parliament.uk/about/living-heritage/transformingsociety/laworder/policeprisons/overview/metropolitanpolice/>.

³⁴ Andrew J. Kavanaugh, Franklin M. Kreml, and Tamm Quinn, *Canons of Police Ethics* (Washington, DC: National Institute of Justice, 1957), art. 2, <https://www.ncjrs.gov/pdffiles1/Digitization/16578NCJRS.pdf>.

Although the *Canons of Police Ethics* figures prominently in this nation's understanding of police ethics, no single code of ethics applies to all police officers in this country. Instead, the decentralized structure of American law enforcement, represented by some 18,000 agencies nationwide,³⁵ creates a circumstance in which no one ethical framework exists to which all adhere. While some states have an agreed upon code of conduct that applies to police officers in every jurisdiction (California being one example), most do not. This lack of standardization nationally makes way for the appearance of regional and even local variations in the ethical frameworks applied to police work by those agencies.

While what is legal is *often* seen as a minimum baseline for determining what is ethical in many professions, it is an absolute imperative where law enforcement is concerned. As mentioned, no single code of ethics applies to all police officers in America. However, adherence to law figures prominently in police ethical codes. The language of the law enforcement code of ethics to which all California peace officers swear includes a pledge to “be exemplary in obeying the laws of the land.” The same phrase is included in the code of ethics outlined on the website of the Texas Police Association.³⁶ According to early ethical policing guidelines adopted by the IACP, as a profession charged with upholding and enforcing the law, law enforcement entities have an absolute obligation to follow the law while enforcing it.³⁷ Article 1 of this same document spells out that upholding the Constitution is “chief among these” laws. This article is instructive since Fourth Amendment concerns figure most prominently in the debate about drone use, particularly by the government. As Moore points out,

³⁵ Gary Corder and Kathryn Scarborough, “Information Sharing: Exploring the Intersection of Policing with National and Military Intelligence,” *Homeland Security Affairs* 6, no. 1 (January 2010): 113, <https://www.hsaj.org/articles/92>.

³⁶ “Code of Ethics,” accessed September 27, 2015, <http://www.texaspoliceassociation.com/codeofethics.php>.

³⁷ Kavanaugh, Kreml, and Quinn, *Canons of Police Ethics*.

however, “the concept of privacy is exceptionally subjective.”³⁸ In this sense then, legislation regarding UAS employment in America’s skies is an absolutely essential precursor for the law enforcement community in defining what is and is not an *ethical* use of the tool.

2. Law, Regulation and Policy

Despite this obvious need, one issue on which broad consensus exists is that current U.S. law does not adequately address the prospect of widespread UAS employment in the domestic airspace. The primary limiting factor related to domestic drone proliferation in the United States among government agencies and businesses is the lack of an approved plan to integrate unmanned aircraft into the NAS.³⁹ This shortcoming was to be remedied by the FAA’s Small UAS Notice of Proposed Rulemaking.⁴⁰ The FAA’s mandate, however, is essentially one of protection of life and property (safety), not protection of privacy, airspace rights, or limits on government authority.

While the FAA’s integration plan will begin to solve the regulatory piece of the UAS puzzle, it only adds to the urgency for legislative action on the part of the Congress. Bloss correctly describes the USA Patriot Act as “the cornerstone of U.S. federal statutes” governing expanded police surveillance authority post-9/11,⁴¹ but the act does not directly address unmanned aerial surveillance. To-date, Congress has not passed a bill dealing with the intersection of UAS and privacy concerns.⁴² This shortcoming presents a particular concern for agencies

³⁸ Jeanie Moore, “Da Vinci’s Children Take Flight: Unmanned Aircraft Systems in the Homeland” (master’s thesis, Naval Postgraduate School, 2014), executive summary, xvii, <http://www.hsdl.org/?view&did=753798>.

³⁹ Wallace, “Integrating Unmanned Aircraft Systems into Modern Policing in an Urban Environment,” 9.

⁴⁰ “Small UAS Notice of Proposed Rulemaking.”

⁴¹ William Bloss, “Escalating U.S. Police Surveillance after 9/11: An Examination of Causes and Effects,” *Surveillance and Society* 4, no. 3 (2007): 217, <http://library.queensu.ca/ojs/index.php/surveillance-and-society/article/view/3448>.

⁴² Wells C. Bennett, “Civilian Drones, Privacy, and the Federal-State Balance,” The Brookings Institution, September 2014, 2, http://www.brookings.edu/~media/Research/Files/Reports/2014/09/civilian%20drones%20privacy/civilian_drones_privacy_bennett_NEW.pdf.

that would seek to employ drones, as Martinelli describes the issue of privacy as central to the ethics of policing in the United States.⁴³

Research related to this aspect of UAS domestic use reflects a high level of interest by legal professionals, as might be expected. A number of congressional reports related to domestic drone use illustrate the interest of both houses of the legislative branch of the federal government on this issue. As with the operations sub-literature, most of the scholarship in the area of law and regulation is recent, most having been published within the last three years. While general agreement seems to exist that the legal framework governing domestic UAS operations is currently behind the operational capabilities of the technology, differences of opinion have occurred about how best to address this shortcoming. As described by Bennett, stakeholders can be divided roughly into two schools of thought. One school looks to the federal government for a single set of legislative guidelines that would lay out a framework that the states could use as a starting point.⁴⁴ Stanley and Crump would agree and make the case that the FAA's mandate to protect individuals on the ground should not be limited to just safety matters but should also include an obligation to protect their privacy.⁴⁵ The other school of thought would prefer to see the states take the lead, with the federal government serving in a supporting role.⁴⁶ McNeal's argument for a "property rights" approach to governing UAS flight limits is one example of this school of thought.⁴⁷

⁴³ Thomas J. Martinelli, "Updating Ethics Training—Policing Privacy Series: Noble Cause Corruption and Police Discretion," *The Police Chief*, March 2011, 62, http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=display_arch&article_id=2339&issue_id=32011.

⁴⁴ Bennett, "Civilian Drones, Privacy, and the Federal-State Balance," 2.

⁴⁵ Jay Stanley and Catherine Crump, "Protecting Privacy from Aerial Surveillance: Recommendations for Government Use of Drone Aircraft," American Civil Liberties Union, December 2011, 2, <https://www.aclu.org/technology-and-liberty/report-protecting-privacy-aerial-surveillance-recommendations-government-use>.

⁴⁶ Bennett, "Civilian Drones, Privacy, and the Federal-State Balance," 2.

⁴⁷ Gregory S. McNeal, *Drones and Aerial Surveillance: Considerations for Legislators* (Washington, DC: Brookings Institution, 2014), 28, http://www.brookings.edu/~media/Research/Files/Reports/2014/10/drones%20aerial%20surveillance%20legislators/Drones_Aerial_Surveillance_McNeal_FINAL.pdf.

Wallace points out that where a legal framework *does* exist, it is based on cases that involved manned aircraft. These cases will need further review in light of the differences in “public view” and “naked eye” interpretation between manned and unmanned aircraft.⁴⁸ The lack of guiding legislation is a key concept, as it may put greater pressure on police ethical frameworks to fill in the decision-making gaps left by the statutory void.

3. Unmanned Aerial Systems Operations and Capabilities

This topic is perhaps the most widely studied that is related to the general issue of UAS deployment. In America’s recent wars in Iraq and Afghanistan, UAS have proven their utility over and over again. Finn and Wright describe UAS as perfectly suited to “dull, dirty and dangerous work,”⁴⁹ which makes them ideal for many battlefield missions. This battlefield suitability led to UAS being widely adopted by both the American military establishment and the intelligence community in the past decade. Since many traditional law enforcement functions can be described in similar terms, drones would seem to be well-suited to those missions as well.

Despite much rancor in the media regarding the targeted killing of people using drones, many see the primary utility of these systems, even for military applications, is for surveillance.⁵⁰ In this sense, the military and intelligence communities’ collective experience with UAS employment is both instructive and useful to the discussion of domestic uses for these same systems, as surveillance of U.S. persons is a recurring theme in the scholarship regarding domestic UAS use. Stanley and Crump express the view of the American Civil Liberties Union (ACLU) regarding drones that current U.S. privacy laws are insufficiently strong to guard against an intrusive technology that is

⁴⁸ Wallace, “Integrating Unmanned Aircraft Systems into Modern Policing in an Urban Environment,” 34.

⁴⁹ Finn and Wright, “Unmanned Aircraft Systems,” 186.

⁵⁰ Stanley and Crump, “Protecting Privacy from Aerial Surveillance,” 4.

simultaneously becoming “cheaper and more powerful.”⁵¹ McNeal offers a rebuttal, asserting that the drone systems currently available to law enforcement are far less-capable surveillance tools than the manned aircraft many agencies currently employ and contemporary attempts to legislate the government’s use of drones is based not on present encroachment on civil liberties but on an expectation of the future capabilities of the technology.⁵²

UAS operations and capabilities research benefits from a broad swath of researchers and source types. Academia, industry organizations, privacy groups, government, and media are all well-represented in the sub-literature. The vast majority of material available on this topic is very recent, with most source material authored within the last five years. The current popularity of the topic of UAS use, in general, and the likelihood of its inclusion in a near-term legislative agenda, make it challenging for any researcher to stay current on this issue.

4. Privacy Concerns

Privacy concerns figure prominently throughout the discourse regarding drone use by domestic law enforcement. In fact, it is the concept of privacy that is seen as most under attack by many researchers considering the expanded use of drones by government. Jay Stanley of the American Civil Liberties Union (ACLU) sees drones as a “concrete and instantly graspable threat to privacy.”⁵³ Ghoshray describes an “Orwellian dystopia” on the near horizon as drone use ushers in a new era of “unwarranted intrusion into private lives.”⁵⁴ Yet the U.S. Constitution contains no explicit right to privacy in the text. Instead, according to the Legal Information Institute at Cornell University, a broad right to privacy is

⁵¹ Ibid., 1.

⁵² McNeal, *Drones and Aerial Surveillance: Considerations for Legislators*, 2.

⁵³ Somini Sengupta, “Rise of Drones in U.S. Drives Efforts to Limit Police Use,” *The New York Times*. February 15, 2013, sec. Technology, http://www.nytimes.com/2013/02/16/technology/rise-of-drones-in-us-spurs-efforts-to-limit-uses.html?pagewanted=all&_r=1.

⁵⁴ Saby Ghoshray, “Domestic Surveillance via Drones: Looking Through the Lens of the Fourth Amendment,” *Northern Illinois University Law Review* 33, no. 3 (2013): 591, http://law.niu.edu/law/organizations/law_review/pdfs/full_issues/33_3/Ghoshray%204.pdf.

inferred by the Constitution. This inference is made in the aggregate within the texts and meaning of the 1st, 4th and 5th Amendments.⁵⁵ Contained as it is within the Bill of Rights, this right is foundational to the social contract between government and the governed in the United States.

While Bloss would agree that privacy rights are central to the relationship between citizens and their government in the American context, he asserts that no constitutional mandate exists for personal privacy rights.⁵⁶ Instead, he argues that this concept derives from case law tied to various means of surveillance used by police. The “expectation of privacy” as it is known today derives from the decision of the U.S. Supreme Court in *Katz v. United States*. In the decision, the court held that electronically eavesdropping while a person used a phone booth to make a call constituted a “search and seizure” within the meaning of the Fourth Amendment, and was therefore, illegal absent a warrant. The court held that the citizen was justified in expecting a certain level of privacy while using a telephone booth. Thus, privacy from *government intrusion* as it is currently understood derives from the case law and not directly from the Constitution. In Bloss’ view, the exercise of this right to privacy must be balanced against the compelling interests of the state in its quest to provide security to its citizens. Considered in this context, security and privacy can be seen as concepts in competition with one another where a balance between the two, although desirable, is elusive.

Whether explicit or not, privacy has come to be foundational to the relationship of the citizen to the state in the United States. Yet, at the federal level, little has been done to address potential UAS infringement on individual privacy. According to a 2015 Congressional Research Service (CRS) report, since the passage of the FAA Modernization and Reform Act of 2012, Congress

⁵⁵ “Right of Privacy: An Overview.”

⁵⁶ Bloss, “Escalating U.S. Police Surveillance after 9/11: An Examination of Causes and Effects,” 212.

has failed to address “the potential privacy implications of drone use.”⁵⁷ The courts have not yet been presented with an opportunity to rule on surveillance conducted by drones; in other words, no legal precedent has yet been set.⁵⁸ Even the regulation is lacking, as the recently published FAA rules governing small UAS flight contain no privacy provisions at all.⁵⁹ The gap left by the federal government is increasingly being filled by a growing body of state legislation. Thompson points out that “almost half the states have enacted some form of drone legislation.”⁶⁰ Yakabe observes that since April 2013, 15 states have passed legislation the primary purpose of which is to constrain the use of UAS by law enforcement agencies to protect citizens’ privacy.⁶¹

Absent federal legislation, Stanley and Crump see state and local restrictions on drone use as “the best thing Americans can do to protect our privacy.”⁶² As states grapple with the issue, no consensus has yet been reached on what boundaries the legislation should set. Instead, the result is a patchwork of laws with varying levels of restriction.⁶³ Oregon law prohibits the weaponization of UAS and requires public entities to register their drones with the Oregon Department of Aviation. Iowa and Utah both passed legislation requiring law enforcement to obtain a search warrant prior to collecting evidence using UAS. Alaska requires a warrant for *any* use of UAS by law enforcement

⁵⁷ Richard M. Thompson II, *Domestic Drones and Privacy: A Primer* (CRS Report No. R43965) (Washington, DC: Congressional Research Service, 2015), summary.

⁵⁸ *Ibid.*

⁵⁹ *Ibid.*

⁶⁰ *Ibid.*

⁶¹ Alison Yakabe, “UAS on Main Street: Policy and Enforcement at the Local Level,” *Homeland Security Affairs* 11, art. 4 (June 2015), <https://www.hsaj.org/articles/4522>.

⁶² Jay Stanley and Catherine Crump, “Why Americans Are Saying No to Domestic Drones,” *Slate*, February 11, 2013, http://www.slate.com/articles/technology/future_tense/2013/02/domestic_surveillance_drone_bans_are_sweeping_the_nation.html.

⁶³ Kaveh Waddell, “Without Federal Drone Rules, States Are Blazing Their Own (Potentially Conflicting) Paths,” *National Journal*, September 1, 2015, <http://www.nationaljournal.com/s/54164/without-federal-drone-rules-states-are-blazing-their-own-potentially-conflicting-paths>.

within the state. According to the National Conference of State Legislatures, 45 states have taken up more than 150 bills related to drone use in 2015 alone.⁶⁴

If dissent exists with regard to the needed legislation, it is because the concept of privacy is constantly evolving, perhaps now more than at any other time in this nation's history. Increasingly capable technical means of data collection and the routine nature of that collection by many types of entities, not just law enforcement, have conspired to make privacy a concept in flux. Marx refers to it as the "new surveillance" wherein data collection "is often integrated into routine activity."⁶⁵ He speaks of the increased use of technology over the past half century to collect personal information and the introduction of computer techniques for data mining, profiling and network analysis. This country has become a surveillance society and it is against this fast-moving conceptual landscape that Solove describes privacy as "a concept in disarray,"⁶⁶ and Finn and Wright see it as a concept in danger of having no meaning at all.⁶⁷

⁶⁴ Waddell, "Without Federal Drone Rules, States Are Blazing Their Own (Potentially Conflicting) Paths."

⁶⁵ Gary T. Marx, "What's New About the 'New Surveillance'? Classifying for Change and Continuity," *Surveillance and Society* 1, no. 1 (2002): 15, <http://www.surveillance-and-society.org/articles1/whatsnew.pdf>.

⁶⁶ Daniel J. Solove, *Understanding Privacy* (Cambridge, MA: Harvard University Press, 2010), 12.

⁶⁷ Finn and Wright, "Unmanned Aircraft Systems," 185.

II. THE ETHICS OF POLICING

The American concept of government is firmly rooted in social contract theory as put forth in the works of John Locke, especially his *Two Treatises on Government* published in 1689. In it, Locke argues that governmental authority does not derive from *divine right*, as was the argument for most monarchies of the period, but from the consent of the governed. Building on the work of Thomas Hobbes, Locke believed man existed in a State of Nature, created by God, in which every man has the freedom to conduct his life as he sees fit. In the State of Nature, people's behaviors are not constrained, as long as it is judged to be in that person's own interest. In this state, no governmental authority punishes individuals who encroach upon the "rights" of others. Instead, the wronged parties are free to defend their own lives and property and to take whatever action they think right to punish the transgressor. Men living in this state are governed by the Law of Nature, known to them through reason, which holds that all men are created equal with equal rights to "life, health, liberty, [and] possessions," and that they ought not to harm one another in any of these aspects or pursuits.⁶⁸ Under the Law of Nature, individuals are permitted to defend their property and their lives, which includes the right to use force, including deadly force, against someone who means to do harm.

It is easy to see how such circumstances could lead to an unending state of war between neighbors. The State of Nature is a rough neighborhood. Absent a civil authority to determine which party is the most aggrieved, individuals are left to seek redress on their own for wrongs committed against them. Hobbes described a state where men have no security other than what their own strength can provide.⁶⁹ As a consequence, man's life is often "nasty, brutish and short."⁷⁰

⁶⁸ John Locke, "The Second Treatise of Civil Government," ch. II, sec. 6, 1690, <http://www.constitution.org/jl/2ndtreat.htm>.

⁶⁹ Thomas Hobbes, *Leviathan* (Seattle, Washington: Amazon Digital Services, 2012), Kindle edition, 50.

⁷⁰ *Ibid.*

It is for this reason, Locke asserts, that men enter into a social contract with one another, surrendering some of their liberty to a civil authority that is empowered to make and enforce laws to govern society. Men's liberty is given in trade so that their own lives might be more secure. They give up some autonomy to govern their own affairs unimpeded in exchange for the safety and security that make civil society possible. Thus, the government itself comes into being as the product of a bargain between citizens. The authority that government wields is also a product of that bargain.⁷¹

The social contract comes with rights and obligations on both sides of the equation. Citizens give up the right to take virtually limitless action in pursuit of their own needs in exchange for an obligation to follow the rules of civil society. The government then accepts three obligations: to provide laws, to provide a means of determining differences according to the law, and to provide a means of enforcing those laws.⁷² Citizens only surrender the right to decide and enforce their own disputes, so long as the government is able to provide an adequate level of security with a reasonable level of liberty. When a government strays too far either way, too authoritarian or too lenient, it surrenders the right to govern and consent of the governed may be withdrawn. Cohen and Feldberg describe the social contract as a limited bargain in which citizens consent to a common authority, as long as the three functions of government are executed. The bargain is conceived as "limited" in that it is not a blank check to any government to serve its own interests.⁷³

These obligations on the part of the civil authority are recognized as the three branches of government in the American system: legislative, judicial and executive. Many of the founding fathers were students of Locke's philosophy and his ideas are foundational for the documents that would give shape to the United States. Both the Declaration of Independence and the U.S. Constitution bear the

⁷¹ Cohen and Feldberg, *Power and Restraint*, 25.

⁷² Locke, "The Second Treatise of Civil Government," ch. IX, sec. 124–126.

⁷³ Cohen and Feldberg, *Power and Restraint*, 33.

unmistakable marks of the social contract. The idea that “all men are created equal” and that they possess certain “inalienable rights” were first proposed by John Locke in his *Second Treatise on Government*. These ideas were the ideological underpinnings that allowed the colonies to withdraw their consent and throw off the governance of King George III in the Declaration of Independence, the argument essentially being that the king had failed to keep up his end of the bargain under the social contract.⁷⁴

A. POLICING AND THE SOCIAL CONTRACT

The police function resides within the executive branch of government. In Locke’s words, under the social contract, the police role is to provide “power to back and support the sentence when right, and to give it due execution.”⁷⁵ This function is served in the fulfillment of the government’s obligation to provide safety and security to its citizens rather than have them provide it for themselves. To that end, police are entrusted with a great deal of power, which is necessary because, as Kleinig observes, without power “the authority to make and apply law will come to nothing.”⁷⁶ This power is not limitless, however, but is bound by the social contract and held as a public trust.⁷⁷ This trust is granted for the means of achieving a collective security that individuals would not be able to provide for themselves.⁷⁸

Police are entrusted with the power to investigate, interrogate, detain or arrest, and seize property in pursuit of the ends of a more ordered society. In certain circumstances, the police are even empowered to commit the ultimate deprivation of liberty, to use deadly force. Bittner described the police as set

⁷⁴ Ibid., 27.

⁷⁵ Locke, “The Second Treatise of Civil Government,” ch. IX, sec. 126.

⁷⁶ Kleinig, *The Ethics of Policing*, 13.

⁷⁷ Monica M. Moll, “Improving American Police Ethics Training: Focusing on Social Contract Theory and Constitutional Principles,” *The Forum on Public Policy*, 2006, 5, <http://www.forumonpublicpolicy.com/archivesum07/moll.pdf>.

⁷⁸ Cohen and Feldberg, *Power and Restraint*, 27.

apart from other citizens by their authority to use what he termed “non-negotiable force.”⁷⁹ Citizens are obligated to submit to the “coercive power” of the police, and it is this fact that can lead to friction when the public views police exercise of authority as oppressive.⁸⁰ According to Kleinig, in exercising this power, they are often governed “not by a closely defined set of rules but by judgment” characterized by “broad discretionary authority.”⁸¹ Police are constantly walking a line between being overzealous or disengaged; between being perceived as heavy-handed or derelict in their duties. Given the authority entrusted to police officers, it is surely an endeavor that requires a clear code of ethics to guide decision making.

Charged as they are with maintaining order and keeping the peace, how well police officers do their job is important both to the citizens whom they serve and to the government of which they are a part. Kleinig described the task of modern policing as a type of “social peacekeeping.”⁸² Police officers are often the first government agent on the scene in any number of situations from the mundane to the dangerous, filling roles beyond those of the enforcement of law. Directing traffic at a high school football game on Friday night is not so much related to law enforcement as it is to mitigating the potential for social friction, maintaining order by ensuring human interactions go smoothly. A police officer responding to a domestic dispute, assuming no assault has occurred, is not acting in the role as an agent of the law so much as a social worker or even a referee. In fact, Cohen and Feldberg used this precise analogy as a heuristic to describe the broad spectrum of societal functions police fulfill.⁸³

⁷⁹ Egon Bittner, *The Functions of the Police in Modern Society: A Review of Background Factors, Current Practices and Possible Role Models* (Cambridge, MA: Oelgeschlager, Gunn and Hain, 1970).

⁸⁰ Kleinig, *The Ethics of Policing*, 19.

⁸¹ *Ibid.*, 38.

⁸² *Ibid.*, 1.

⁸³ Cohen and Feldberg, *Power and Restraint*, 35.

As arguably the most visible agents of governmental authority, police conduct can have a great impact on how citizens view their relationship with their government.⁸⁴ Police are by definition *first responders*, often first on-scene after an event that is out of the norm for most people. Thus, people often encounter police when they are under stress, perhaps even at the worst moment of their lives. Also, the opinion formed of police, and by extension, the government, is in some part determined by the nature of the circumstances that brought the person into contact with the police in the first place. Persons who feel they were not treated fairly in a police interaction will have their feelings toward the police affected, no doubt, but their feelings toward their government as a whole may also be adversely affected. Thus, a lot is riding on how police conduct is perceived. Police are expected to ensure the safety of the public while simultaneously upholding each citizen's rights; to maintain order without overstepping any boundaries, with nothing less than the legitimacy of government at stake. If the government proves ineffective at both providing security and enforcing the rights of the people, then it has not met its obligations. In this case, the people no longer owe any allegiance to that government.⁸⁵ Legitimacy goes hand-in-hand with effectiveness.

B. ETHICAL STANDARDS IN POLICING

According to Kleinig and Zhang, it is only in the last century that ethical codes have assumed a more prominent role in society as they have proliferated beyond the traditionally held "professions" of medicine, law and theology. Codes of ethics have been adopted by an ever-expanding list of job types where some service is provided to the public that the public is generally unable to provide for itself.⁸⁶ Professions as diverse as business, banking, architecture, and policing

⁸⁴ Paul R. Benson, "Political Alienation and Public Satisfaction with Police Services," *Pacific Sociological Review* 24, no. 1 (January 1981): 45, doi:10.2307/1388792.

⁸⁵ Moll, "Improving American Police Ethics Training: Focusing on Social Contract Theory and Constitutional Principles," 5.

⁸⁶ Kleinig and Zhang, ed. *Professional Law Enforcement Codes: A Documentary Collection*, 1.

have adopted ethical codes as a mechanism for enforcing institutional standards. These codes differ substantially in specifics, as they address the particular services provided, but in all cases, such codes serve to protect the “consumers” served.⁸⁷ How those consumers perceive those protections and their adequacy will inform their views of the service provider, as well as the profession, in general. Ethical codes, then, exist in a social context.

This trend toward defining ethical codes according to public services offered and a particular job description is informative. For the purposes of this thesis, ethical standards will be understood to be functionally specific; that is, to be directly related to the role individuals play in society. Ethics in this sense are guidelines to action that lie within those individuals’ moral frame, but may differ for those individuals depending on what their function (also understood as duty) is in their role in the community.

This approach to ethics is deontological in nature and fits within the Lockean view of the social contract. For police, the ethical standards of the profession lie within the moral frame of the society *in which* they live and function and *of which* they are a part. Police officers are, after all, a part of society, albeit with a particular role within it. Thus, ethical standards should be understood to be socially informed (within the moral standards of society) and positionally dependent (determined by the person’s role within society).

If the premise is accepted within the social contract that the legitimacy of government derives from the consent of the governed and it is agreed that the police, with their uniforms and frequent public contact, are some of the most visible agents of government, it is clear that the consequences of having inadequate ethical standards among police are high. Yet, as discussed in the previous chapter, the United States does not have a universal police code of ethics. Indeed, no consistent understanding of what terminology to use to refer to standards of right and wrong conduct exists, although all police departments

⁸⁷ Prinsloo and Kingshot, “Ethics in Policing,” 53.

have standards (whether written or not) to which their officers are expected to adhere. Visit the websites of several law enforcement agencies within a region and a variety of mission statements, statements of values, codes of ethics, codes of conduct, creeds and pledges can likely be found. While some departments may make distinctions between the various forms these documents may take, Kleinig and Zhang say that approach is a mistake. In their view, to do so is to attempt “to introduce precision where it does not exist.”⁸⁸ They go on to explain that some departments may have published documents that fit one or more of these title descriptions and that they should not be separated from one another but considered as an “integrated unit” that works together to provide the “code” to which the agency subscribes. It is with this understanding that this thesis takes the broad view of what constitutes a code of ethics for a law enforcement agency. Statements of ideals, value statements, codes of ethics and codes of conduct are all considered in this text as expressing the ethical standards of a particular department when and where they are found. In this way, this thesis removes the necessity of the “precision” Kleinig and Zhang warned against and cast the largest possible net to examine the decision-making guidance that exists for law enforcement in determining what is right and wrong conduct.

Whatever form they take, such statements do not *create* a public obligation on the part of the police. Rather, they *reflect* the occupational standards that the department has committed to upholding.⁸⁹ The accountability value of these codes is found on two fronts: (1) describing to the public the conduct they may expect of the police and (2) expressing to those within the ranks of the police what they have committed themselves to do.⁹⁰ They are, in effect, public promises that police make to their constituents and to themselves.

⁸⁸ Kleinig and Zhang, ed. *Professional Law Enforcement Codes: A Documentary Collection*, xi.

⁸⁹ Kleinig, *The Ethics of Policing*, 239.

⁹⁰ *Ibid.*

C. LAW ENFORCEMENT CODES OF ETHICS

Davis defines ethics as “moral standards applying to all members of a group simply because they are members of that group.”⁹¹ The fact that no single code of ethics exists that applies to all sworn police officers in the United States, although problematic for the study of police ethics, is a natural outgrowth of this country’s federal system of government with divided powers distributed among several layers. With over 837,000 sworn officers employed by nearly 18,000 law enforcement agencies,⁹² law enforcement in the United States is far from a unitary project. The consequence of this fragmentation is lack of standardization in the codification of ethical norms.

Davis posits that codes of ethics may be categorized as belonging to one of three distinct types: ideals, principles, and requirements.⁹³ The first type, a statement of ideals, presents lofty standards to which members should aspire but may not be able to achieve. Davis describes the dedication to such ideals as a “sacred undertaking.” As such, these concepts are often aspirational and falling short does not necessarily make one worthy of blame.⁹⁴ These aspirational goals should not to be construed as a mandatory minimum below which nobody may fall but as something for which all should strive. The second type, principles, are understood to be broad guidelines to which people should adhere but for which the judgment of whether they have achieved the intended ends may be subjective. A pledge to maintain public confidence in the profession of policing or in a particular department may be clearly stated, but a standard that is hard to measure. Principles fall somewhere short of “sacred” on the attainability scale, but are still not very useful as a yardstick of success. The third category, requirements, should be understood as stating rules that are required of all

⁹¹ Michael Davis, “Do Cops Really Need a Code of Ethics?,” *Criminal Justice Ethics* 10, no. 2 (June 1991): 16.

⁹² Cordner and Scarborough, “Information Sharing: Exploring the Intersection of Policing with National and Military Intelligence.”

⁹³ Davis, “Do Cops Really Need a Code of Ethics?,” 17.

⁹⁴ *Ibid.*

adherents.⁹⁵ Davis describes these as duties, and in contrast to ideals, they may be rightly considered minimums below which no adherent may fall. Codes in this category are commonly entitled codes of conduct and are often found in police manuals or similar documents describing the minimum expectations placed on agency employees.

Thus, the ethical framework that exists for law enforcement officers may be described in very general terms or in very specific ones. A department's code of ethics may contain lofty, scarcely attainable ideals (and nothing more) or it may include descriptions of mandatory minimum standards of conduct, or a type of rulebook. Fuller describes these differing standards as existing along a vertical line of human achievement with the "morality of aspiration" existing at the top and the "morality of duty" at the bottom.⁹⁶ The morality of duty "lays down the basic rules without which an ordered society is impossible."⁹⁷ The morality of aspiration, by contrast, functions in the realm of virtue and the highest standards of human conduct. As Cohen and Feldberg put it, "virtue is an ideal to strive for."⁹⁸ Moreover, every action undertaken that is somehow beyond duty is good, with some actions being better than others.

It is in this fuzzy, imprecise realm that the various police codes of ethics exist. Some are broadly based and tend more toward describing virtues to which law enforcement officers should aspire. Some are much more specific, laying out specific "dos" and "don'ts" for officers in the department. Some codes exist somewhere in between. The examples that follow, taken from documents published online by the departments described (both of which have a COA on file

⁹⁵ Davis, "Do Cops Really Need a Code of Ethics?," 17.

⁹⁶ Lon L. Fuller, *The Morality of Law*, revised ed. (New Haven, CT: Yale University Press, 1977), 5, https://books.google.com/books?id=5bC42qnmEC&pg=PR3&dq=the+morality+of+law&lr=&source=gbs_selected_pages&cad=2#v=onepage&q=the%20morality%20of%20law&f=false.

⁹⁷ Ibid.

⁹⁸ Cohen and Feldberg, *Power and Restraint*, 43.

with the FAA for drone operation), are useful illustrations of codes of ethics that function at opposite ends of this continuum.

1. The Aspirational Code

Table 1 describes a law enforcement code of ethics that is largely aspirational in nature. It is a composite statement on the part of a sheriff’s office that encompasses a vision statement, a mission statement, and a short list of values that members of the agency are expected to uphold. This normative approach to the ethics of policing describes in very general terms how deputies in this particular sheriff’s office should act. For the most part, it does not prescribe a particular conduct but lays down general guidelines for the attitude and sense of duty the deputies are expected to bring to their work. With the possible exception of the commands to “preserve life” and “be truthful in all we do and say,” no empirical standards are available by which to judge whether the deputies has met the requirements of the code.

Table 1. Vision, Mission and Values Statement, Clackamas County (OR) Sheriff’s Office

Vision	To become a world-class sheriff’s office.		
Mission	To preserve life, uphold the law, prevent crime, hold offenders accountable and promote safety while finding innovative solutions and building partnerships with the community.		
Values	Honesty	Courage	Justice
	<i>We will be truthful in all we do and say, acting with character and principle and serving the community in an open, transparent and professional manner.</i>	<i>We will serve the community with compassion and commitment, lending our strength to those who are most vulnerable and unable to protect themselves.</i>	<i>We will always be fair and impartial, enforcing the law without bias or favoritism. We will treat each person we meet with courtesy and honor their rights, beliefs and diversity.</i>

Adapted from Clackamas County Sheriff’s Office website, accessed November 11, 2015, <http://www.clackamas.us/sheriff/goals.html>.

Although measures of success may be hard to assign, this big picture approach to law enforcement ethics is not without value. Its aim is to inspire

virtue among its adherents, focusing as it does on the character of the agent, not on a specific course of action (deontological), or on the outcome (consequentialist) desired. Although the desired outcome is described in the vision and mission statements, it is not the focus of this ethical code. The focus is on inspiring deputies to be virtuous. These are lofty goals to be sure, and worthy of the police officer's role within the social contract. Where this type of code of ethics presents a problem for this thesis is that, taken by itself, it is not descriptive enough. A search of documents available online for a corresponding *code of conduct* for the Clackamas County Sheriff's Office did not return any documents that could be so described. Even without evidence to the contrary, it is hard to imagine that deputies in this particular office do not have a set of rules by which their day-to-day activities are governed. These rules almost certainly exist and they constitute part of the "code" by which the employees of the sheriff's office function. Keeping that code out of the public domain, however, may be counterproductive for the department's stated goals. Building partnerships within the community may be more difficult if the community does not have access to standards and expectations that should be deemed reasonable when dealing with their local law enforcement officials. Virtues and character count, but they may not be adequate guidance for an officer in the field deciding when or how to use a drone in furtherance of a law enforcement need. The concept of the adequacy of an ethical code for guiding drone-related decision making is taken up in greater detail in a later chapter.

2. The Descriptive Code

On the opposite end of the spectrum from the aspirational code of ethics previously outlined, the code used by the Seattle Police Department is far more specific. The department's code of ethics shown in Table 2 is found within the Seattle Police Department Manual that is available in its entirety online on the agency's website. In addition to a composite statement of principles, goals, and values, the manual includes an employee conduct policy that works in conjunction with the broad ethical statement. Together, they lay out a much more

descriptive model of acceptable employee conduct. By making both publicly available on the agency’s website, expectations for employee conduct are delineated for both police officers *and* for the public, which creates an environment in which all parties to a police contact are more likely to know what to expect. It is in keeping with transparency efforts on the part of the department and is supportive of the social contract.

Table 2. Seattle Police Department Code of Ethics

Principles	Justice	Excellence	Humility	Harm Reduction	
Goals	Preventing / Fighting Crime		Community Policing	Harm Reduction	
Values	Justice	Excellence	Humility	Harm Reduction	Service
	<i>I will treat people fairly and act in good faith. I will work toward racial and social justice for all.</i>	<i>I will not be satisfied with the status quo. I will review all systems and processes with an eye towards improvement, efficiency, and professionalism. When I attend training or review new policies I will strive to master the material because I recognize that training leads to competency.</i>	<i>I will learn from both positive and negative experiences and share what I learn with others. I will listen to what other people are saying, ask questions and consider their concerns.</i>	<i>I will commit to exploring new ways to improve public safety while reducing harm to communities and individuals. I will think outside the box and look for long-term and sustainable solutions while partnering with others.</i>	<i>The common thread tying these four principles together is service. Service is the first word on my shoulder patch and I will keep service to our community as my first priority. I will provide that service with pride and dedication.</i>

Adapted from “The Seattle Police Department Code of Ethics,” accessed November 11, 2015, <http://www.seattle.gov/police-manual/general-policy-information/code-of-ethics>.

The employee conduct policy for this department offers specific behavioral guidelines for officers to follow. Title 5 of the online manual includes 20 discrete sections dealing with topics ranging from how to handle gifts and gratuities to social media use to standards on bias-free policing. Title 6 of the manual covers

arrests, search, and seizure. Title 7 concerns the handling of evidence and property, and Title 8 is solely concerned with the use of force. With this level of granularity, the Seattle Police Department's approach sharply contrasts with the aspirational approach of the Clackamas County Sheriff's Office to providing a police code of ethics. Standards are specific, and in many cases, quantifiable. This approach should be understood as duty based or deontological approach to police ethics. The focus is on specific behaviors expected of adherents and not on the consequences of those behaviors (although that may be implied) or on the virtue of the actor (although creating virtuous actors would be desired). Further, by publishing these standards in the public domain the Seattle Police Department is giving its constituents a "peek behind the curtain;" inviting scrutiny of its officers' actions, and perhaps, strengthening the consent of that constituency under the social contract.

D. THE COMPARATIVE VIEW

This comparative view of ethical codes is useful if picturing ethical standards as a continuum much as Fuller described with moral aspirations at the top and moral duties at the bottom.⁹⁹ Ethical codes that are aspirational seek to inspire a level of virtue among their adherents, inviting them to strive for high ideals, to reach beyond even what may be attainable. In the course of this striving, police conduct will be elevated to a higher plane as officers seek to emulate "the highest levels of human achievement."¹⁰⁰ It is a laudable goal to be sure. Society wants its police to be "good guys, to be the personification of the best human characteristics moving amongst us. It is an effort at inspiring virtue, but is it practical? Gilman posits that ethics codes are too abstract, which makes

⁹⁹ Fuller, *The Morality of Law*.

¹⁰⁰ *Ibid.*, 5.

them too difficult to enforce.¹⁰¹ He suggests that to have an ethical code without a strategy for implementation may be worse than having no code at all.¹⁰²

What about the more descriptive, rule-based code offered by the Seattle Police Department? Is this level of granularity required to achieve the ends of guiding police officers to “right” conduct? Gilman would suggest that it is. He states that codes of conduct are “designed to anticipate and prevent certain specific types of behavior.”¹⁰³ This level of specificity is necessary to address the abstractions presented by an aspirational code of ethics to offer guidelines for decision making. Moreover that is the point, to offer a guide to conduct that will be useful to officers in the field. It serves not only to protect the employee but also to protect the government¹⁰⁴ vis-à-vis the social contract. While the loftier code of ethics focuses on “dos,” the code of conduct focuses on “do nots.”

A code of ethics is not an enforcement tool but a thinking tool. It guides an individual’s thoughts and frames their approach to the difficult problems that require discretionary thinking and judgment. A code of conduct is more enforceable precisely because it is less abstract. The code of conduct offers more concrete guidelines for decision making. The two “codes” should not be considered as separate entities, however, but as parts of a whole that mesh together to provide aspirational goals for the achievement of “virtue,” as well as more measureable markers of success for what is considered “good” behavior provided by the duty-based code of conduct. Together, they make up the ethical framework for police officers to approach their work.

A code of ethics is meant to serve as a guide to human conduct; to assist in moral decision making when people must choose how to act in often difficult

¹⁰¹ Stuart C. Gilman, *Ethics Codes and Codes of Conduct as Tools for Promoting an Ethical and Professional Public Service: Comparative Successes and Lessons* (Paris, France: Organization for Economic Cooperation and Development, 2005), 15, <http://www.oecd.org/mena/governance/35521418.pdf>.

¹⁰² Ibid., 16.

¹⁰³ Ibid.

¹⁰⁴ Ibid.

circumstances. It is about choosing actions in the provision of service in keeping with an individual's profession and the role played within the society. Police agencies are a community within a community. Their values are a reflection of those of the public they serve, though they will not mirror them exactly.¹⁰⁵ The police code of ethics within a particular jurisdiction may be more strict than the public's moral standards in certain dimensions (regarding public behavior of officers off-duty, for example) and more permissive in other dimensions (regarding prying into the affairs of others when acting in an official capacity). Ethical frameworks for policing, therefore, should not be seen as static. If they are, they run the risk of being outgrown or rendered meaningless as society moves on. Rather, they should be made up of living documents that are subject to change over time as the expectations, even demands, of the public develop. It is in this light, possessing a capacity for change, that police ethical frameworks must be viewed when considering drones and their place within the ethical continuum of law enforcement tools.

¹⁰⁵ Martinelli, "Updating Ethics Training—Policing Privacy Series: Noble Cause Corruption and Police Discretion."

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III. TECHNICAL TOOLS AT POLICE DISPOSAL

The particular law enforcement tool under consideration in this thesis is UAS. Owing to the comparatively brief time that drones have been a part of the public safety discourse in the United States, experience on which to draw is seriously lacking while looking for a way forward that is drone-specific. Considered in a broader context, however, UAS can be thought of as just another technical tool coming into the kit of policing in this country. With that in mind, other technical tools are available with which people have more experience that may shed light on the issues faced when considering the benefits and potential pitfalls attendant to bringing new technology onboard.

In general, that which is *legal* is not always synonymous with that which is *ethical*, although the law may be a reflection of ethical standards to which most people would subscribe.¹⁰⁶ For police who are charged with *upholding* the law, however, whether or not an action is legal, is a necessary starting point in the ethical decision-making process. Article 1 of the *Canons of Police Ethics* (1957) states the “primary responsibility” of a police officer is the “protection of the people...through the upholding of their laws.”¹⁰⁷ In Article 2, this same document proclaims that, “The first duty of a law enforcement officer, as upholder of the law, is to know its bounds upon him in enforcing it.”¹⁰⁸ Although not taken as a pledge by all police officers in this country, this same sentiment is commonly found in other police ethical codes in use throughout the United States. It is in recognition of the fact that the police officer’s relationship with the law is different than that of the public. Charged with upholding the law, the police officer is necessarily bound by it because the law is the primary mechanism through which

¹⁰⁶ Manuel Velasquez et al., “What Is Ethics?,” Markkula Center for Applied Ethics, August 18, 2015, <http://www.scu.edu/ethics/practicing/decision/whatisethics.html>.

¹⁰⁷ Kleinig and Zhang, ed. *Professional Law Enforcement Codes: A Documentary Collection*, 93.

¹⁰⁸ *Ibid.*

the people place limits upon the police.¹⁰⁹ Thus, the “legality” of an action is a necessary deontological reference for what is ethical conduct by police. They have a duty to follow the law just as they work to ensure others do the same. Ethics are rules of conduct that relate to an individual’s place in society and, more specifically, to that person’s job within that society. Police, then, have a special relationship with the law that makes the legality of an action an important first test for whether or not that action is “right” for an officer to take.

This unique relationship between police conduct and the law is useful for tracing how different technical tools came to be accepted as ethical for police to use in the course of their duties. Technology affects everyone; it changes how tasks are accomplished and sometimes even makes the previously impossible commonplace. For many, when new technology comes on line, people free to try it, provided they can afford it, to see if it makes work easier or is otherwise desirable. For most, the litmus test of whether a technology will continue to be used is simply whether it gets the job done and is cost-effective. Just like in other professions, police often test new tools for applicability to their jobs to see if the tool will make them more effective or their job easier. A further litmus test for many tools that get added to police kit, however, is whether the courts will allow its use, and if so, under what conditions. To describe this process, the author has chosen to consider three common technical tools regularly used by law enforcement. By considering the court cases that set the legal boundaries for use of those tools, it is possible to better understand how these tools came into widespread acceptance as reasonable for law enforcement use.

A. WIRETAPS

Owing to the influence of television, wiretaps may be the most recognizable surveillance tool in the police arsenal. Also known as “lawful intercept,” the practice of communications monitoring today applies to all types of

¹⁰⁹ Kleinig and Zhang, ed. *Professional Law Enforcement Codes: A Documentary Collection*, 94.

communications, including data transmission and cellular communication. In the context of phone conversations, anyone who has ever watched a crime drama on television has a reasonable idea of what a wiretap entails and the situations in which such a technique might be employed by law enforcement. Contrary to the perception obtained from watching television or going to the movies, however, wiretaps are far from common. In 2012, a total of 3,395 wiretaps were authorized by federal and state judges nationwide.¹¹⁰ In a nation of over 300 million, that figure does not seem particularly large.

The constitutionality of wiretapping was first considered by the U.S. Supreme Court in 1928 with *Olmstead v. United States*.¹¹¹ In this case, the court ruled that eavesdropping on a telephone conversation electronically did not constitute a search since it did not involve physical entry into the defendant's place of business. Thus, the action did not violate the defendant's Fourth Amendment right against unreasonable search and seizure.¹¹² Almost 40 years later, this decision would be overturned by the Supreme Court in *Katz v. United States*. In its 1967 decision, the court ruled that Katz did have a reasonable expectation of privacy when using a public phone booth, which the defendant used to transmit information regarding illegal gambling wagers. The court found that authorities had overstepped by listening in on the defendant's conversations without first securing a warrant.¹¹³ Most notably, the case helped define the "reasonable expectation" test that would help determine whether government activity constitutes a search. The test essentially has two parts. The first is whether the subject of the investigation has an "expectation of privacy in the

¹¹⁰ "Wiretap Report 2012," last updated December 31, 2012, <http://www.uscourts.gov/statistics-reports/wiretap-report-2012>.

¹¹¹ "Olmstead v. United States," 1928, <https://www.law.cornell.edu/supremecourt/text/277/438>.

¹¹² Richard F. Hamm, "Olmstead v. United States: The Constitutional Challenges of Prohibition Enforcement," Federal Judicial Center, 2010, 19, <https://www.law.cornell.edu/supremecourt/text/277/438>.

¹¹³ Susan Freiwald, "First Principles of Communications Privacy," *Stanford Technology Law Review* 3 (2007): para. 20, <https://journals.law.stanford.edu/sites/default/files/stanford-technology-law-review-stlr/online/freiwald-first-principles.pdf>.

object of the search,” and the second is “whether that expectation is one that society would see as reasonable.”¹¹⁴ The court’s decision reflected that Katz had an expectation of privacy when he went into a phone booth and closed the door, and that he was reasonable to think so by societal standards. In contrast to the Olmstead decision, the court now held that physical intrusion was not necessary for government eavesdropping to constitute a search. Simply listening in on the conversation was enough in this instance. The efforts Katz made in securing his privacy (closing the door behind him once in the booth) speak to his expectation. According to Freiwald, if made in a public place without any efforts at disguise or protection, his conversation would not have been protected. By way of explanation, she writes:

To require that government agents refrain from viewing information disclosed to the general public is both unfair and unnecessary. It is unfair because the government should not be disadvantaged vis-a-vis the average member of the public. It is unnecessary because we assume that before people make information publicly available they have either determined the repercussions of that disclosure to be harmless, or have assumed the risk of those repercussions.¹¹⁵

The police use of wiretaps is a good place to begin for two reasons. First, judicial consideration of wiretaps takes place first in the timeline of the tools considered in this thesis. The legal determinations made in this aspect of limits on governmental authority informed later court decisions affecting other technical surveillance tools. In particular, the reasonable expectation test figures prominently in most cases. Second, the progression of judicial thinking on how police may use wiretaps illustrates an important concept with regard to how society thinks about limits placed on police authority. The Olmstead decision, which came about in the Prohibition era, could be interpreted as quite permissive with regard to allowable police conduct. In the later Katz decision, the court reversed this thinking, and placed greater constraint on government authorities acting without a warrant. In effect, the court first set a low bar with respect to the

¹¹⁴ Freiwald, “First Principles of Communications Privacy,” para. 20.

¹¹⁵ *Ibid.*, 6.

starting point for allowable police eavesdropping, then raised that bar almost four decades later. The point is, just as public attitudes may change over time, the same is true of the courts' interpretation of the law. In addition, as the legality of an action is a minimum starting point for determining whether police conduct is ethical, police ethical practices should be thought of as under ongoing review by the courts, subject as they are to judicial scrutiny in cases that come to light in the course of criminal prosecution. Thus, the courts constitute an external mechanism for ethical oversight of police action, but their reference point is far from static.

B. VIDEO SURVEILLANCE

Shortly after the Katz case, Congress passed the first major legislation dealing specifically with electronic surveillance, the Omnibus Crime Control and Safe Streets Act of 1968. Title III of the Act specifically set out the rules for government authorities to obtain wiretaps in the United States,¹¹⁶ which removed much of the ambiguity that had previously existed. Nieto observes that, although the act did not specifically address video surveillance, the courts decided in *United States v. Torres* its tenets could be applied to video surveillance to determine the admissibility of the evidence.¹¹⁷ In 1986, Congress followed up with the Electronic Communication Privacy Act, which attempted to deal with the rapid expansion of technologies, such as video surveillance. Importantly, the act made a distinction between video surveillance that included an audio component and that which did not. Under the act, images captured by *video only* surveillance equipment on public streets did not require a warrant as no "interception" of a communication was involved.¹¹⁸ The Fourth Amendment implications are clear, that which takes place in public and in plain view cannot be reasonably expected

¹¹⁶ "Title III of The Omnibus Crime Control and Safe Streets Act of 1968," September 19, 2013, <https://it.ojp.gov/PrivacyLiberty/authorities/statutes/1284>.

¹¹⁷ Marcus Nieto, "Public Video Surveillance: Is It an Effective Crime Prevention Tool?," California Research Bureau, California State Library, June 1997, <http://www.library.ca.gov/crb/97/05/>.

¹¹⁸ *Ibid.*

to be private. In 1993, the Ninth Circuit Court of Appeals upheld this viewpoint when it found in *United States v. Sherman* that subjects in a public area in view of silent video surveillance had no reasonable expectation of privacy.¹¹⁹

The presence or absence of audio on surveillance video became pivotal for whether something could be reasonably expected to be private. Actions that were taken in view of the public were fair game. Even if a police officer was not present to observe a criminal act, video that captured the act could be used as evidence. In Nieto's view, it made continuous video surveillance "analogous to a mechanical police officer."¹²⁰ This stance had the effect of extending the *plain view doctrine* to cameras placed in public areas. Under plain view rules, police may seize items of evidentiary value that are in plain view, provided the officer has a right to be there in the first place.¹²¹

As Freiwald observed, police need not be handicapped where public view is concerned. Police officers do not walk around with blinders on, unmoved and inattentive to that which is happening around them until called to the scene of a crime that has already been committed. They are not just crime investigators, but expected to be crime *stoppers* as well. In consideration of the social contract, wherein the public has traded some liberty in exchange for security—security which police ostensibly provide—it could be argued the police are *ethically obligated* to be a deterrent to criminal activity, which requires movement within and interaction with society. To do less would be derelict.

C. MANNED AIRCRAFT

Manned aviation units have long been a feature of law enforcement in the United States and it makes sense to consider police use of manned aircraft as part of any study about the reasonable use of UAS in law enforcement.

¹¹⁹ "990 F. 2d 1265—United States v. Sherman," accessed December 13, 2015, <http://openjurist.org/990/f2d/1265/united-states-v-sherman>.

¹²⁰ Nieto, "Public Video Surveillance: Is It an Effective Crime Prevention Tool?"

¹²¹ Joe Petrocelli, "The 'Plain View' Doctrine," Hendon Media Group, July 2006, http://www.hendonpub.com/resources/article_archive/results/details?id=3658.

According to a 2007 Bureau of Justice Statistics report, “approximately 20% of all agencies with 100 or more sworn officers had aviation units.”¹²² Increase the size of the departments to those with 1000 or more officers and the proportion with aviation units increases to 75%.¹²³ Together, these aviation units “provided aerial coverage for more than 90% of the nation.”¹²⁴ These units were involved in a multitude of missions including vehicle pursuit, counter narcotics, counterterrorism, emergency medical response, prisoner transport, firefighting and SWAT operations. As a group, these aviation units spent an estimated \$300 million on aircraft acquisition, maintenance, and fuel.¹²⁵ Clearly, aircraft are a capable tool, but an expensive one. The expense is no doubt a major factor driving the fact that most aviation units are found in the largest departments where a larger population and correspondingly larger budgets can support them. This fact makes drones so attractive; they will put an aviation capability, albeit modest, within reach of most law enforcement agencies in the nation. For a small town police chief facing a drug epidemic, it might seem unethical *not* to find a place for drones in the strategic plan.

Having an “eye in the sky” is no doubt attractive for law enforcement, but it is the courts that ultimately decide if and under what conditions aircraft can be used by police. Several Supreme Court cases are instructive in laying the ground rules for police employment of manned aircraft. *Dow Chemical v. United States* (decided May 19, 1986) is one such case. In 1978, having been denied entry to a chemical manufacturing plant in Midland, Michigan, operated by Dow Chemical Company, the Environmental Protection Agency (EPA) conducted an aerial surveillance of the plant pursuant to enforcing aspects of the Clean Air Act. The agency used an aircraft operating at altitudes ranging from 1,200 to 12,000 feet

¹²² Lynn Langton, *Aviation Units in Large Law Enforcement Agencies, 2007* (Washington, DC: DOJ, Office of Justice Programs, 2009), 2, <http://www.bjs.gov/content/pub/pdf/aullea07.pdf>.

¹²³ *Ibid.*

¹²⁴ *Ibid.*

¹²⁵ *Ibid.*, 1.

and took photos of the plant with a sophisticated GPS mapping camera.¹²⁶ When the company became aware of the activity, Dow Chemical sued to stop the warrantless surveillance. In its decision, the Supreme Court held that the open areas of Dow's plant were not analogous to a dwelling and that use of an aircraft to conduct surveillance of the plant did not constitute a search of the property.¹²⁷ Although Dow had taken steps to ensure the privacy of what went on *behind the fence*, the court ruled the company's expectation of privacy was unreasonable, given the plant's size and location.¹²⁸ A key aspect of the case was that the aircraft was operated in public airspace and the observations were made from a vantage point accessible to any aircraft operating in that airspace.

In *California v. Ciraolo* that same year, the court affirmed that a man growing marijuana in his backyard was not protected from surveillance by a police aircraft operating at 1,000 feet, as permitted by FAA regulations. Even though he had taken steps to protect his plants from view on the ground by erecting privacy fencing, the court ruled his backyard was in "plain view" of the aircraft operating in public airspace, and thus, his expectation of privacy was not reasonable.¹²⁹ In both cases, government authorities were operating aircraft in airspace in common use and accessible to the public.

These two cases notwithstanding, the court has placed limits on the aviation tools that may be brought to bear by law enforcement, even when operating in the public airspace. In *Kyllo v. United States*, the court ruled that evidence of an indoor marijuana grow established through the use of a thermal imaging device mounted on an aircraft could be suppressed because using the

¹²⁶ Diane Rosenwasser Skalak, "Dow Chemical Co. v. United States: Aerial Surveillance and the Fourth Amendment," *Pace Environmental Law Review* 3, no. 2 (April 1986): 278–9, <http://digitalcommons.pace.edu/cgi/viewcontent.cgi?article=1207&context=peir>.

¹²⁷ "Domestic Drones: Case Law," 2015, <https://www.nacdl.org/domesticdrones/caselaw/>.

¹²⁸ Skalak, "Dow Chemical Co. v. United States: Aerial Surveillance and the Fourth Amendment," 280.

¹²⁹ "Domestic Drones: Case Law."

device constituted a search and that search was conducted without a warrant.¹³⁰ A key aspect of the case was that the equipment used by authorities to gather the evidence about activity going on inside the home was not a device that was in “general public use.” This point became a key test of whether or not police activity constitutes a search under the Fourth Amendment. This finding has enormous implications for future decisions regarding domestic drone use. As UAS platforms and their available payloads become more capable, the temptation to employ a growing array of sensors in law enforcement missions will only increase. The courts have made clear their expectation that police may not be too far out in front of commonly available technology unless they first secure a warrant. However, as advanced technologies become commonplace on drones operated by organizations and individuals outside of government, it becomes harder to argue against police use of those same tools. Interestingly, the proliferation of drones in the United States for commercial and recreational purposes will likely have the effect of expanding the list of advanced tools that could prove useful for law enforcement. Depending on what the civil market for UAS demands, yesterday’s unattainable capabilities could become tomorrow’s “general use” tools, and thus, available to any police department that operates a drone.

D. FINDING THE STANDARD BY WHICH TO JUDGE POLICE CONDUCT

All this begs the question, “If you *can*, does that mean you *should*?” Just because a technology is within an agency’s reach, should that technology become part of the regular list of tools employed by that agency? It is a surprisingly common ethical dilemma faced in a number of industries and professions. A Google search for the phrase “the ethics of can and should” returns 149 million results. The first few pages of results reveal some version of this question being asked in fields as varied as marketing, journalism,

¹³⁰ William P. Weiner, “Kyllo v. United States, Docket No. 99-8508,” American Bar Association, Preview of U.S. Supreme Court Cases, 2015, http://www.americanbar.org/publications/preview_home/publiced_preview_features_kyllo_us.html.

nanotechnology manufacturing, crop genetic modification, environmental health, self-driving cars, torture, and photography. It is a worthy question for any number of endeavors, but applied to police, whom Bittner called “the bearers of non-negotiable force,”¹³¹ and the stakes for society could not be higher.

Is it ethical for police to push the boundaries on the legal limits of their authority as they seek to provide the security that is their responsibility under the social contract? Is it ethical for police *not* to push those boundaries? From a police officer’s point of view, not to go to the “end of the chain” on allowable conduct might be the safe thing to do from a liability aspect, but it probably would not be considered professional excellence. Charged as they are as the peacekeepers of society, police go to great lengths to provide the security that is their remit under the social contract. Sometimes, in pursuit of this goal, an officer may go too far. When that happens it is known as *noble cause corruption*.

According to Wallace, noble cause corruption occurs when police do not adhere to constitutional constraints on their behavior.¹³² Martinelli described this as corruption by police officers “committed in the name of good ends” which often happens when officers “care too much about their work.”¹³³ It is most likely to occur when police take on a consequentialist frame for judging their own actions. More bad guys off the street means greater security for citizens; contract fulfilled. It can be particularly vexing for law enforcement in an age of terrorism, where media and the public have come to see *any* successful attack as evidence of broad failures within the homeland security enterprise; a domain in which law enforcement officers are the foot soldiers. Thinking only about outcomes is dangerous for police in a free society, however, because it neglects the balance

¹³¹ Jerome H. Skolnick and Thomas C. Gray, ed., *Police in America* (Boston, MA: Little, Brown and Company, 1975), 67.

¹³² Wallace, “Integrating Unmanned Aircraft Systems into Modern Policing in an Urban Environment.”

¹³³ Thomas J. Martinelli, “Unconstitutional Policing: The Ethical Challenges in Dealing with Noble Cause Corruption,” *The Police Chief*, October 2006, http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=display&article_id=1025&issue_id=102006.

in the hypothetical bargain of the social contract wherein a measure of liberty is surrendered in exchange for a reasonable amount of security.

Balance is the aim. Achieving it is made more difficult by the differing frames by which the various constituencies concerned judge police conduct. The term reported time-and-again in the media with regard to judging police conduct is “accountability,” but accountability according to what standard? For the courts, which most often have defined the constitutional limits of police authority, the reference is a deontological one. They judge police conduct according to the standards and expectations placed on police by the legislature, through the enactment of laws which police both enforce and are expected to abide by themselves, and according to the limitations placed on police authority by the constitution.

On the part of the public, a consequentialist standard is most often applied to police conduct. This point is most clearly illustrated when periods of public unrest are seen following the disclosure of police conduct that citizens might find objectionable. One frequent catalyst for public unrest related to police conduct is the use of force. When police use the “non-negotiable force” Bittner described, the view of the public is often less than sympathetic because the public tends to see that force in terms of the outcome. Initial public demonstrations in Ferguson, Missouri, following the handling of the Michael Brown shooting in August 2014, could be seen as one example. Crowds of protestors, unhappy with what they saw as overzealous policing and dissatisfied with the handling of the investigation into the officer-involved shooting of Michael Brown, took to the streets to demonstrate their displeasure with the dual outcomes of a dead 18-year-old black man and no indictment handed down for the shooter, Officer Darren Wilson. In such cases, “justice” is a common refrain among those who take to the streets, and increasingly, social media. They are focused on outcomes.

The courts, or more broadly the legal system, in this case personified by the grand jury that considered whether Officer Wilson’s actions merited criminal

charges, decided not to bring charges. The members of the grand jury saw things differently than “the street” because they used a different standard by which to judge Officer Wilson’s actions. Grand juries must necessarily use a deontological frame. The focus of that frame will be on questions regarding what were the officer’s duties in the situation according to the law, as well as what action was within his right to take. The fact that the grand jury decided not to bring charges against Officer Wilson says that, from a deontological point of view, the grand jury was of the opinion that Wilson was not wrong in shooting Michael Brown, given the totality of the circumstances. That the U.S. Department of Justice (DOJ) did not bring civil rights charges in the case illustrates that the DOJ agreed, at least insofar as Michael Brown’s civil rights are concerned. The social friction that resulted came about as a consequence of the different frames of reference for deciding right and wrong used by the different constituencies involved.

This friction is indicative of a broader point that Kleinig makes regarding how accountability for police is best implemented. The police are accountable to the community they serve according to the traditions of that community and an understanding of the social order within it. They exercise authority that is bestowed upon them in the social contract, but that authority is not understood to be rigid or fixed. The authority that police wield can be “reconfigured” as societal norms change.¹³⁴ Kleinig also makes the point that disagreement often occurs within a community about which values police are supposed to protect and exactly how they are supposed to protect them. Far from being a homogeneous block with identical social expectations, the public is diverse and fragmented.¹³⁵ This circumstance can contribute to an “us versus them” mindset among the public and within police ranks. This circumstance is problematic for the social contract.

¹³⁴ Kleinig, *The Ethics of Policing*, 212.

¹³⁵ *Ibid.*, 213.

Having dealt with deontological and consequentialist frames for judging police conduct and their likely constituencies, a virtue-based frame deserves some mention. The most likely group to use such an agent-centered reference for judging police conduct is the police themselves. Given as it is to aspirational goals, described by Davis as ideals,¹³⁶ virtue-based behavioral standards are hard to quantify and problematic to judge. Even more so than with the already mentioned deontological and consequentialist frames, a standard for accountability is not readily apparent. Virtues are not absolutes, but something people possess in degrees. As Fuller described the “morality of aspiration” existing at the top of a vertical line of human achievement,¹³⁷ so a virtue-driven code of ethics held by police for judging their own actions is likely to result in loftier outcomes. No studies have been identified to date that suggest conforming to a virtue-based standard of conduct would build a bankable cache of goodwill among the public that the police could draw on in times of crisis. Indeed, in the age of social media, public opinion can quickly turn on any issue. However, it may be that aiming to achieve virtuous conduct on the part of police could keep them out of trouble in the first place and contribute to the shoring up of public trust. Although beyond the scope of this thesis, the topic is one worthy of future study.

Thus, all three normative approaches to ethics have value for policing. Defining officers’ duties and the limits of their authority are central to questions of the legality of a police officer’s conduct as they will be decided by the courts, a key concern for any law enforcement officer. The consequentialist frame cannot be overlooked because it is the one that the media and the public tend to use when judging police conduct. When gaps in the two judgments are apparent, civil unrest may result. Finally, inspiring officers to be virtuous, to aim high in creating and modeling character, is worthy of the police officer’s role within the social contract.

¹³⁶ Davis, “Do Cops Really Need a Code of Ethics?,” 15.

¹³⁷ Fuller, *The Morality of Law*, 5.

The ethics of policing in this nation's democracy is about defining right and wrong conduct, not just what is within the limits of the law, but also about what is within the limits of our values. It is about more than just meeting the necessary minimums from a deontological aspect; staying within the limits of the law. It is also about aspiring to higher standards in the search for virtue. The evidence suggests society does not want its police officers to merely meet the minimums. It wants police officers that are true public servants who represent and demonstrate what is best in this country's society, even as they deal often with what is worst in it.

IV. TOWARD A DRONE-SPECIFIC CODE OF CONDUCT

The place of UAS in policing remains hard to define in large part because of how this society currently views the adoption of this new and disruptive technology. The United States has over 18,000 law enforcement agencies.¹³⁸ As of this writing, only 79 governmental agencies have applied for and received a COA issued by the FAA.¹³⁹ Of those, approximately 20 agencies are law enforcement entities. Accordingly, very little experience is available from which to draw regarding what acceptable and unacceptable conduct looks like in law enforcement's use of drones. Too few agencies deploy them. Too few communities are impacted by them. Learning that would inform agencies seeking to map the way forward with what will likely become a widely used public safety tool is not yet sufficiently available.

It has been demonstrated that legislation governing law enforcement's use of technical means is a necessary reference point for policing, establishing as it does the deontological baseline for the permissible use of those tools. The lack of legislation governing drone use is particularly problematic for law enforcement agencies seeking to become early adopters of the technology. To fill in the gap, the need for clearly defined ethical guidelines for drone use could not be more apparent.

What would those guidelines look like? What parameters should be included? With such limited experience in the government's use of the technology and little prospect of expanding that experience much in the near term (owing at least in part to the FAA's lengthy COA application process), an operationally useful code of conduct for drone use in law enforcement remains elusive. This chapter contends that, using the relevant case law for other technical tools available to law enforcement, along with documentary evidence of

¹³⁸ Cordner and Scarborough, "Information Sharing: Exploring the Intersection of Policing with National and Military Intelligence", 113.

¹³⁹ "Unmanned Aircraft Systems, Freedom of Information Act Responses."

emerging best practices within the law enforcement UAS community, it is possible to outline a starting point for a drone-specific code of conduct that agencies might consider as they develop their own drone use policies. It is understood that conduct standards will vary from jurisdiction to jurisdiction as the communities each department serves vary in the expectations they place on the police agencies that serve and protect them. Also, as states deal with the drone issue through legislation in the coming months and years, the deontological standards to be applied by the courts will become more clearly defined. However, this conversation is worth having at this early juncture precisely because the statutory limitations for drone use by law enforcement are so scant. With little legislation, and even less case law to draw upon, the immediate way forward for police drones will be largely left to the police themselves. This circumstance creates a unique opportunity for police departments to define ethical constraints that may then lead the legislation that will eventually follow. Well-considered drone use guidelines that address all three normative ethical frames and take into account the concerns of an anxious public could secure the future use of the technology for law enforcement by showing that reasonable limits can be placed on drone use in the public sphere. The consequences of failing to address these issues include police loss of legitimacy in the eyes of the public, as well as the loss of the use of drones altogether if their deployment is perceived to be abusive.

As stated previously, aspirational goals set forth in a vision statement or statement of values for law enforcement agencies are useful in that they function on the higher end of what Fuller described as an ethical continuum.¹⁴⁰ They can inspire officers to virtue, raising the bar for their decision making above the merely acceptable minimums for police officers codified in the law. By contrast, a code of conduct defines for officers the minimum expectations for their actions and has the advantage of offering more readily measurable guides to action. Gilman states that both are necessary. They should be thought of as parts of a

¹⁴⁰ Fuller, *The Morality of Law*, 5.

whole, providing concrete guides to action while inspiring police officers to be their best selves.¹⁴¹

As a code of conduct exists on the more actionable end of the ethical continuum, it is the focus in this thesis. The “big picture” values of a particular police department will not change simply with the introduction of a new tool in the toolbox. The limits of acceptable action in the use of a new tool do need to be addressed with some specificity, however, as the capabilities of improving technology may not fit neatly within the existing decision-making framework. Also, it is the “street level” decision making with regard to drone use that will have the most near-term impact on the relationship between law enforcement agencies and the communities they serve.

A. THE EMERGING LITERATURE

Although in its infancy, a body of literature is beginning to emerge that speaks to how law enforcement should begin to deploy UAS for public safety missions. In 2012, the IACP published its *Recommended Guidelines for the Use of Unmanned Aircraft*.¹⁴² In this document, the IACP organized its recommendations for law enforcement drone use into five categories including definitions, community engagement, system requirements, operational procedures and image retention. A particular emphasis in the document is placed on engaging with actors outside law enforcement early so that they may have a voice in creating the procedures for law enforcement drone deployment. Although this type of dialogue may be a departure for many agencies, the unique privacy concerns that drone use by government raises make this a point worth considering for law enforcement executives. Involving those outside law enforcement in defining the limits of drone use may have the effect of increasing buy-in for those procedures once put into practice. The IACP guidelines further

¹⁴¹ Gilman, “Ethics Codes and Codes of Conduct as Tools for Promoting an Ethical and Professional Public Service: Comparative Successes and Lessons,” 14.

¹⁴² “Recommended Guidelines for the Use of Unmanned Aircraft.”

recommend that the media be involved in the procedural development process as well. This involvement speaks of efforts at transparency and shows recognition that *communicating* governance efforts to the public is just as important as the efforts themselves.

Other transparency measures in the guidelines include keeping detailed flight logs and establishing auditing procedures for those logs. Accountability is a clear concern as in both areas the importance of supervisory involvement and sign-off is emphasized. The IACP goes so far as to recommend supervisory approval for every drone flight, as well as a log entry detailing the reason for each UAS flight. The IACP urges consideration of a “Reverse 911” system to alert the public regarding when and where UAS are being used in real time, which adds further emphasis to transparency efforts.

Safety is another key concern addressed in the guidelines. Pilot/crew training is mentioned, as are the flight parameters that allow for aircraft operation and control. The IACP recommends spelling out that only trained and certified operators will operate the UAS and that those operators will maintain line-of-sight contact with the aircraft. Even though the line-of-sight requirement is imposed by the FAA as a pre-condition for COA approval, emphasizing this point in agency drone guidance has value, as it shows that officials are concerned with the safety and security of the public and not just the enforcement of law. This emphasis is in keeping with Cohen and Feldberg’s observation that at times “providing for public safety ... may involve forgoing law enforcement.”¹⁴³ In other words, enforcement of the law is merely a means to an end to provide the public with a measure of safety and security. The use of model aircraft (essentially scaled down versions of civil or military aircraft) intended for hobbyists and outfitted with cameras is discouraged due to safety and reliability concerns.

Although the topic does not yet figure prominently in the domestic drone debate, the IACP takes up the issue of use of force in its document, and

¹⁴³ Cohen and Feldberg, *Power and Restraint*, 55.

recommends against the deployment of any type of weapon system on a law enforcement UAS. The reasoning is two-fold, concern over the reliability of such systems, and a stated belief that public acceptance of armed drones in domestic airspace is doubtful.¹⁴⁴ Since the vast majority of UAS missions, including those undertaken by the DOD, are primarily in the area of surveillance of one type or another, it would be an unnecessary complication to bring weapons into the equation. To do so could lead to push back on the part of the public with respect to law enforcement drone use for *any* reason.

Privacy considerations are at the forefront of defining reasonable use parameters with any surveillance tool. Those concerns are only heightened in an age in which the concept of privacy seems to be constantly evolving. Finn and Wright went so far as to describe privacy in the modern world as a “concept in disarray.”¹⁴⁵ The prospect of a future with drone-filled skies only contributes to the confusion. Perhaps owing to the importance of this issue in the present discourse, the issue of privacy is prevalent in the introductory section of the IACP document. The authors note that privacy concerns could overshadow the potential benefits of law enforcement drone deployment and jeopardize acceptance of the tool among the general public. Specific recommendations for police agencies include seeking a search warrant in advance of any drone flight where an intrusion on privacy is possible and evidence of criminal activity is likely to be collected.¹⁴⁶ The IACP also recommends against keeping any images collected by a drone where maintenance of those images is not necessary for an ongoing criminal investigation or required by law.¹⁴⁷ Any retained images should be available for “public inspection,” according to the IACP guidelines.¹⁴⁸

¹⁴⁴ “Recommended Guidelines for the Use of Unmanned Aircraft.”

¹⁴⁵ Finn and Wright, “Unmanned Aircraft Systems,” 185.

¹⁴⁶ “Recommended Guidelines for the Use of Unmanned Aircraft.”

¹⁴⁷ *Ibid.*

¹⁴⁸ *Ibid.*

Words like “transparency” and “accountability” appear frequently in the conversation about UAS use in the United States. Efforts to meet public expectations in this regard can take many forms. One important messaging tool that has been employed by the Mesa County Sheriff’s Office (MCSO) in Colorado is the online publication of frequently asked questions (FAQ) related to the agency’s UAS deployment. According to the agency’s website, the MCSO flew its first UAS mission in 2008.¹⁴⁹ Thus, the Mesa County’s program is one of the longest running law enforcement drone programs in the country. Consequently, the department’s experience with these systems can be informative for other agencies considering adopting UAS.

The FAQ sheet is provided online as a portable document file (pdf) accessed through a link from the MCSO website.¹⁵⁰ As in the IACP guidelines, definitions are dealt with early in the FAQ sheet and in some detail to establish a common lexicon with the reader. The term “drone” is abandoned in favor of “unmanned aircraft system,” which may serve to establish some conceptual distance between the familiar rhetoric of drone use overseas as portrayed in the news media (which comes with some negative connotations) and the equipment being employed by the MCSO. A brief description of how UAS work is included as a specific description of the two types of UAS the agency fields including manufacturer, model and name. Not only does this information work in a definitional sense, but it also demonstrates a level of transparency on the part of the department. Going public with this information gives anyone with Internet access an opportunity to research those particular systems for information about their specifications and capabilities. Eliminating some of the unknowns with respect to the equipment being used fills informational voids that members of the public might otherwise populate with “worst case scenario” thinking. The FAQ sheet makes clear the differences between the types of UAS operated by the

¹⁴⁹ “UAS Most Frequently Asked Questions,” June 2015, <http://sheriff.mesacounty.us/uav/faq.aspx>.

¹⁵⁰ “Unmanned Aerial System Team,” accessed December 7, 2015, <http://sheriff.mesacounty.us/uav/>.

military in war zones overseas and the hand-launched UAS employed by the department.

Other transparency-aimed disclosures in the FAQ sheet include specific cost data related to system acquisition and operation. The document lists how much the department has spent on the program to-date as well as an estimated cost-per-hour to operate the department's systems. Relative operating costs for manned aviation platforms are included as a point of reference, which shows the value proposition for the community whose tax dollars ultimately support the program. The document declares to the reader that what is driving UAS employment in law enforcement is its cost effectiveness relative to manned aviation. The implied point is that drone use does not represent an expansion of law enforcement missions so much as a more efficient way of fulfilling those missions that already exist. A brief listing of missions for which UAS are commonly employed by the department is given, which emphasizes crime scene photography and search and rescue missions.¹⁵¹

Safety concerns are addressed by outlining crew certification and training requirements. Maintenance of flight proficiency is mentioned, although not in great detail. The fact that the MCSO is engaged with the FAA in developing a standardized UAS pilot training program is stressed and lends credibility to the overall safety effort. FAA-imposed flight restrictions including daylight only operation, 400 feet altitude limits, and separation from airport traffic are spelled out in the document. The department makes clear its position on the use of force by stating unequivocally that their UAS platforms do not include weapons systems and that no plans exist to add that capability in the future.

Privacy concerns are addressed with mention of 4th Amendment protections and the role of case law with regard to law enforcement's use of aviation assets. This very broad area of concern is dealt with in-brief, however, without mention of the inherent differences between UAS and manned aviation,

¹⁵¹ "UAS Most Frequently Asked Questions," 1.

or the fact that relevant case law has yet to be revisited in the context of drone use for law enforcement purposes. Self-imposed limits *are* evident in the department's declaration of its intention to seek a warrant for the observation of private property pursuant to an investigation.¹⁵²

It bears mentioning that at least one UAS industry group published a Code of Conduct for unmanned aircraft operations on its website in July 2012.¹⁵³ The Association of Unmanned Vehicle Systems International (AUVSI) intended its code of conduct to "provide a set of guidelines and recommendations for safe, non-intrusive operations" with the stated intent to contribute to safety and "accelerate public confidence in these systems."¹⁵⁴ The major themes in the document are safety, professionalism, and respect. Concerns with crew training and competence are prevalent, and in line with those outlined in the IACP guidelines and the MCSO FAQ sheet; however, they are dealt with in much more detail. Weather, vehicle reliability, and airspace regulations all figure prominently in the safety section. Compliance with the law and FAA regulations is addressed in the professionalism portion of the document, well beyond any treatment of the topic in either the IACP document or the FAQ sheet. Privacy concerns are mentioned in the respect section, although in very general terms.

B. COMMON THEMES

Although differing in format and audience, the intent of each of these documents is the same, to communicate rules governing UAS use espoused by the issuing agency. In the case of the IACP, the intent is to inform law enforcement agencies of the types of issues they will encounter in choosing to use drones and to persuade those agencies to adopt certain suggested limitations on that use. In the case of the FAQ sheet published by the MCSO, the

¹⁵² "UAS Most Frequently Asked Questions," 2.

¹⁵³ Kevin Begos, "Drone Aircraft Code of Conduct Unveiled," *The Huffington Post*, July 3, 2012, http://www.huffingtonpost.com/2012/07/03/drone-aircraft-code-of-conduct_n_1645566.html.

¹⁵⁴ "Unmanned Aircraft System Operations Industry 'Code of Conduct,'" July 2012, <http://www.auvsi.org/content/conduct>.

intent is to inform the public regarding FAA directed and self-imposed rules that limit how the agency deploys its two drone types. Also, in the case of the AUVSI Code of Conduct, the intent is to encourage adoption of ethical operating practices within the UAS industry itself.

Despite the differing audiences, when considered as a group, some common themes can be observed in the overlapping space:

- an emphasis on public **engagement** with regard to agency drone use
- calls for **transparency** in mission types, as well as in record keeping
- concerns about **accountability** including supervisory approval for UAS flight and oversight mechanisms against abuse
- assurance that all UAS activities will be within **legal limits**
- stressing public **safety**, especially in crew training requirements
- clear statement on the **use of force**
- **privacy** concerns, including 4th Amendment protections, data use and access and warrant requirements

These common themes can be drawn upon to create a template for a drone-specific code of conduct to govern UAS deployment for law enforcement missions. The template highlights seven dimensions that are shown by the emerging literature to be of interest to one or more constituencies interested in drone employment. It is recommended that the agency include in its code of conduct language that addresses each of these dimensions. The level of restriction or permissibility conveyed in each dimension by the specific language used is left to the agency leadership to decide. The template does not dictate what should be said, just that *something* should be communicated that touches on each dimension. In this way, the template allows for regional variation in community acceptance of drone technology in general, and the government's use of that technology, in particular.

C. CODE OF CONDUCT TEMPLATE

A code of conduct should be understood as part of the greater ethical code to which a department commits itself in the pursuit of enforcing the laws of the community it serves. The code of conduct functions near the deontological baseline of permissible police conduct delineated by the law and captures concrete, enforceable standards of behavior expected of every sworn member of the department. It cannot anticipate or answer every ethical dilemma officers will face in their career, but it should function much closer to “street level” and offer more specific decision-making guidance than a vision statement, statement of values, or similar virtue-based, aspirational document can provide.

The following template is limited in scope by design. It is only concerned with engaging an audience on the issue of drone use and is not intended to be all-encompassing even in that narrow domain. Rather, it should be considered a starting point, a lattice work on which a law enforcement agency can hang language intended to inform and persuade a public that may be understandably skeptical about government use of this new and capable technology.

At a minimum, a drone-specific code of conduct should communicate agency intentions in the following dimensions:

- **Engagement:** Delineate by what mechanism the agency will communicate with the public regarding UAS use for law enforcement missions. Consider town hall meetings, regular press releases or even regular updates through social media.
- **Transparency:** List the mission types for which the UAS will be flown. Make a statement on what records will be made available to the public regarding UAS use. Consider including flight log entries and/or flight and maintenance cost data. Include a statement of agency policy regarding sharing drone-collected data with sister law enforcement agencies.
- **Accountability:** Clearly state what level of approval is required for each UAS flight. If the decision is left to the senior police officer on-scene, then so state. If supervisory approval is required, make a clear statement of that fact. If mutual aid requests for drone use will be entertained, state the process for consideration of those requests.

- **Legality:** Make an unequivocal statement that the UAS will be operated in accordance with all local, state and federal laws, as well as in compliance with FAA regulations and the agency certificate of waiver authorization.
- **Safety:** Delineate safety of flight considerations for UAS operation. A statement committing to public safety over law enforcement mission accomplishment is recommended. Detailing crew training requirements, operator qualifications, and currency requirements is also recommended.
- **Use of Force:** State clearly the agency's position on the use of force through or by a UAS.
- **Privacy:** Commit the agency to consideration of privacy issues before each UAS flight. A commitment to upholding the tenets of the 4th Amendment is recommended. A statement committing to adhere to warrant requirements, when dictated by relevant case law, may be desired.
- **Brevity:** Include general guidelines that are enforceable in the code of conduct, but do not cover all possible scenarios. A more detailed description of "dos" and "don'ts" should be addressed in a policy and procedures manual or in an operations manual that deals specifically with the UAS to be employed by the department.
- **Publicly available:** Part of the value in a code of conduct lies in its function as a "statement of civic expectation," as described by Gilman.¹⁵⁵ To set an expectation on the part of the public, it must first be known to the public. The intent of publishing a drone-specific code of conduct is to put the public more at ease about how and when the agency intends to employ its UAS. By affording the public a certain degree of knowledge regarding both the *missions* for which UAS are used and the *limitations* placed on that use, public consent may be gained for drone employment.
- **Continually revised:** Consider the code of conduct a living document, intended to be revised over time. Revisions may be in response to operational lessons learned or in response to ongoing dialogue with the public or a combination of these. Also, it is expected that future legislation will further refine the allowable limits of the government's use of UAS. Revision of a drone-specific code of conduct will likely be necessary as legal constraints are more clearly spelled out. Agencies should communicate to all relevant constituencies at the outset that

¹⁵⁵ Gilman, "Ethics Codes and Codes of Conduct as Tools for Promoting an Ethical and Professional Public Service: Comparative Successes and Lessons," 3.

their code of conduct is a “work in progress.” Doing so removes the necessity to “get it completely right” at the outset and allows for learning through operations with the intent to incorporate that learning into the code.

A certain level of plasticity in the *approach* to the document is a must. In the early stages of UAS adoption for policing, there are too many unknowns. As more agencies adopt drones for law enforcement missions, a need may emerge for airspace sharing or deconfliction procedures. As agencies with overlapping jurisdictions field their own systems, attention will need to be paid to ensuring agencies that operate in close proximity to one another are aware of each other’s operations. Mutual aid agreements may need to be revisited between adjacent jurisdictions, as UAS come into common use.

Many of these future issues make more sense as subjects to be covered in operations and procedures manuals, but these hypothetical scenarios serve to illustrate why the agency approach to a drone-specific code of conduct cannot be a “one and done” proposition. The realities of law enforcement drone use *will* change over time. The details found within a code of conduct will likely change along with circumstances. It should be understood that it can be done without necessarily changing the character of the document or the agency’s commitment to responsible drone use.

V. CONCLUSION

A. REVIEW

This thesis examined the issue of law enforcement use of UAS from an ethical perspective. It described ethics as rules governing individual conduct that are functionally specific, relating to the role people play in society. It showed that the role police play in U.S. communities, and the ethical frameworks they use to guide their conduct, have a great impact in defining the relationship between the people and their government in the American context, colored as it is by the social contract and the idea, enshrined in the Declaration of Independence, that the legitimacy of any government is derived from the consent of the governed.¹⁵⁶

Empowered to enforce the laws by which society has corporately agreed to be governed, police have a unique ethical relationship to the law. For an action to be ethical for police to take, it must first be legal. The law is a necessary deontological reference point for officers and agencies in defining right and wrong conduct. Unfortunately, in the current environment, legislation governing UAS use by police agencies is lacking. This circumstance creates a referential void for law enforcement executives seeking to put drone technology to use in service of the public.

In the absence of clearly defined legal frames for drone employment, a pressing need exists for agencies that intend to field UAS to adopt a drone-specific code of conduct to guide their use of this increasingly capable technology. FAA regulations will only address safety of flight issues, as this is the agency's mandate. Federal legislation governing the use of UAS by government agencies is not on the near horizon. State legislatures are beginning to take up the issue, but no consensus has yet emerged on how this nation intends to employ drones in the public safety realm. Police agencies, if they are to adopt drone technology and keep access to the benefits it can provide, will need to

¹⁵⁶ Jefferson, "Declaration of Independence."

engage and inform the public they serve about exactly *how* and *under what circumstances* they intend to use UAS for law enforcement functions. This is necessary if law enforcement agencies are to fulfill their obligations under the social contract. The code of conduct can be an important tool in that effort to engage and inform.

Challenges exist in this line of research. Owing to a number of factors, very few law enforcement agencies in the United States have made the effort to initiate a UAS program. For this reason, the body of documentary evidence related to how and when agencies intend to employ drones, as well as the limitations they place on that use, is very small. This shortfall will correct itself with time. For the present research, drone use guidance was gleaned from a small sample of documents now publicly available that represent, to some degree, the thinking of the UAS industry, law enforcement executives, and one local law enforcement agency on the ethical use of UAS in the national airspace. While this list is by no means exhaustive, it offered a window into a list of concerns present in the current discourse about how drones fit in the public safety kit of American law enforcement. How each agency that ultimately adopts UAS chooses to deal with those concerns will vary, depending on the needs and attitudes of the communities each serves. What *will* remain constant is the need to address those concerns in an accountable and transparent way.

The most consistent documentary evidence publicly accessible regarding government use of UAS is available on the FAA website. While it is a useful disclosure, it falls short if the goal is in any way to put public fears at ease regarding police drones in American skies. The COA packages available online are helpful in determining which agencies are currently seeking to bring UAS into their “toolbox,” but some, such as those on file for the Federal Bureau of Investigation, are so heavily redacted as to be of little use to researchers or police executives trying to plan a flight path toward a future that includes drones. Such a high level of secrecy about general use guidelines is, in this author’s opinion, both unnecessary and problematic for the social contract. As Benson

noted, police are entrusted with a great deal of power, and as arguably the most visible agents of governmental authority, their conduct can have a great impact on how citizens view their relationship to their government.¹⁵⁷ By placing too much emphasis on secrecy, the government runs the risk of supplanting the enemy it seeks to thwart in the minds of the citizenry. Until recently, UAS have been tools of war. As these tools are adapted to domestic missions, a certain level of public unease should be expected. If American society is to remain free, as well as secure, a certain level of disclosure about how that security is provided should be required.

That disclosure may take any number of forms. This thesis argues that a published code of conduct that is drone-specific presents an excellent vehicle for law enforcement agencies to engage with a public that shows signs of mistrust of government. A code of conduct has weight; it sets expectations, for the public, and for the police officers themselves.¹⁵⁸ By directly addressing an anxious public through a declarative statement, such as a code of conduct for drone use, law enforcement agencies can at one time set clear limitations for their officers and begin to regain public trust.

The primary research question posed by this thesis was whether a prevailing ethical framework exists to govern the use of UAS for domestic law enforcement functions. This thesis concluded that no such consensus exists. Indeed, this research showed no single set of ethical guidelines to which all American police agencies subscribe is available. Rather, state and local law enforcement in the United States is fragmented, which results in a lack of standardization regarding ethical norms. Whether by accident or by design, this circumstance allows agencies to be responsive to local and regional concerns with regard to the ethics of policing. It also leads to a certain amount of disparity of opinion nationally on what constitutes right or wrong conduct for police. For

¹⁵⁷ Benson, "Political Alienation and Public Satisfaction," 45.

¹⁵⁸ Kleinig, *The Ethics of Policing*, 239. "Recommended Guidelines for the Use of Unmanned Aircraft," 2012.

this reason, absent federal legislation on the matter, a common understanding regarding ethical conduct for law enforcement's use of UAS is unlikely in the near term. While the IACP *Recommended Guidelines for the Use of Unmanned Aircraft*¹⁵⁹ provides a worthy reference point for police executives considering adopting UAS, it cannot address all the local variations in public attitudes concerning police use of drone technology. That task must be left to each jurisdiction to define for itself.

B. RECOMMENDATIONS

This thesis puts forth the proposal that each law enforcement agency that intends to employ drones for police functions develop a drone-specific code of conduct to communicate clearly to its officers and the public it protects the boundaries of what it considers the ethical use of UAS. To facilitate the safe and ethical use of UAS in the domestic law enforcement arena, and to lay the groundwork for public acceptance of the use of drone technology for public safety purposes, the following recommendations are made:

- Any police agency considering the adoption of drones should develop and adhere to a drone-specific code of conduct to guide decision making about how and under what circumstances drones will be employed for law enforcement missions.
- The code of conduct should be formalized and published in the interest of transparency, both to increase buy-in on the part of the public and to keep police accountable for any misuse of the technology.
- The code of conduct should be treated as a “living document” that will change over time as drone-governing legislation is passed and public attitudes toward UAS develop.

Public opinion is not static; the expectations, even demands of the public are subject to refinement over time. It is in this light, possessing a capacity for change, that the code of conduct should be understood when considering drones and their place alongside other tools employed in law enforcement missions.

¹⁵⁹ International Association of Chiefs of Police, *Recommended Guidelines for the Use of Unmanned Aircraft*.

On examination of contemporary examples of drone use documents, some common themes emerged. Drawing on these themes, it is possible to create a drone-specific code of conduct that sets a broad deontological baseline for police drone use, informing operators and the public alike. Based on these common themes, it is further recommended that any drone-specific code of conduct communicate the agency's intentions in the following dimensions:

- engagement
- transparency
- accountability
- legality
- safety
- use of force
- privacy

The exact language to be used in addressing each dimension is left to the individual law enforcement agency, as the specific concerns of the community each serves will vary from jurisdiction to jurisdiction. This list is by no means all-encompassing. Regional variations in attitudes toward the police, as well as legislation (where it exists) governing drone use by government agencies, may add dimensions that need to be addressed. Time will also play a part. As this nation's society gains more experience with the technology through recreational, as well as business use, the concerns with regard to law enforcement's use of the technology will likely change. Thus, the seven dimensions listed should be considered a starting point for the development of a code of conduct that will evolve and grow along with understanding and experience.

C. AREAS FOR FUTURE SCHOLARSHIP

In conducting this research, gaps in the scholarship relating to how police relate to the communities they serve became apparent. Some of the questions

that arose but were beyond the scope of this thesis are presented as areas for consideration of future scholarship:

- Does a publicly declared law enforcement code of conduct engender public confidence or goodwill toward that particular law enforcement agency or toward law enforcement, in general?
- What are the best engagement mechanisms to employ for the purpose of keeping the public informed regarding police missions, tools and activity?
- What are the regional differences in this country, if any, in attitudes toward law enforcement and the underlying causes of those differences?

D. SUMMARY

Two hundred forty years on, the American experiment in democracy is still unique in the world. John Locke's idea about the relationship of citizens to their government, that the power of the latter only exists so long as the former agree, is as bold today as it was when first given voice. It is also an idea that is in need of renewed consideration. The social contract is both empowered and challenged by the advent of new technologies and new capabilities that could scarcely have been imagined by the Founding Fathers. The unprecedented levels of access to information made available by the growth of the Internet create a myriad opportunities for officials to engage and inform the public regarding government efforts on its behalf. This same interconnectedness comes with an ever-growing number of windows into citizen's lives through which government may peer, whether in the name of public safety or something else.

Constant tracking by the cell phones (in the name of selling something), eerily accurate Internet advertisements that appear in the margins of websites visited, the periodic release of more documents related to the Edward Snowden revelations, all contribute to the feeling of becoming (or have already become) a society under constant overwatch. The relentless march of technology both empowers and imperils. The prospect of drone use by law enforcement just adds to the cacophony.

UAS use by police is just one facet of an ever-broadening debate in this country about the costs of security in the modern world. Drone technology is not going away. Americans will learn how to live with it and how to use it for recreation, business, and government. The debate about the police use of drones, however, is a debate about the future of policing. It is a debate that a society must have if it is to make informed decisions about how much liberty citizens are willing to surrender for an increased measure of safety. Law enforcement agencies are uniquely positioned at this moment to lead that conversation in an open and responsible way. By demonstrating that drone technology can contribute to collective security in a way consistent with the American principle of limited government, and by engaging with their communities so that the role drones play in public service is clearly understood, the law enforcement community can avoid being “grounded,” and relegated to using only the tools of the past.

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