Introduction: The purpose of this study was to determine what variables predict privacy concerns. In other words, do political affiliations, location, or gender affect a participant’s emotions toward their privacy?

Abstract
Unmanned aerial systems (UAS), also known casually as drones, have changed the ways in which many industries conduct business. One prevalent example would be their use by police organizations (local patrols, SWAT, etc.) to revolutionize their surveillance capabilities. Many major city police commissioners have stated their interests in welcoming the use of UAS. Past studies have analyzed citizen’s emotions in regard to privacy concerns focusing on the amount of time the drones spent patrolling--either twenty-four hours a day or in mission-only conditions. The purpose of this study was to determine what variables predict privacy concerns. In other words, do political affiliations, location, or gender affect a participant’s emotions toward their privacy?

Two hundred participants were surveyed through Amazon’s Mechanical Turk (MTurk). They were presented with hypothetical scenarios involving police issued UAS patrols occurring near their residence. Following the scenario, they were asked to rate statements from a validated UAS privacy scale and then complete a set of demographic questions that served as potential predictors. A linear regression analysis revealed two significant predictors. First, females were more likely to express privacy concerns during the UAS missions compared to their male counterparts (B = .31). Second, people who rated themselves are more conservative also expressed more privacy concerns compared to people who rated themselves as more liberal (B = .30).

Current use of UAVs
The introduction of UAVs has exponentially grown to the state of a phenomena and has been integrated in multiple industries. UAVs are being implemented across multiple industries due to the creative exploitation of its features that can get some companies the cutting edge they need to stand out. At the moment the UAV market is expected to exceed $8.35 billion by the end of this year.1 Soon to follow are states like Tennessee and South Carolina which are both in government’s seeing the potential of utilizing the unique features a UAV can bring. This has paved the way for government agencies support of the use of UAVs by police officers with the state of North Dakota being the first state to allow police to equip drones.2 Soon to follow are states like Tennessee and South Carolina which are both in the legislative process to soon follow.3

Privacy Concerns
The current literature emphasizes the dire need to take into consideration the privacy of those affected. Especially how these concepts should be considered in the design process, this is especially highlighted through Anderson’s principles of Privacy by design.4 Past studies have looked at the public’s perception of UAVs and the privacy concerns that come along with their use in delight police officers. It has been highlighted that for the public both fear and disgust mediate their relationships.5

Hypotheses
H1: In general, at least one of the following demographic variables (age, gender, income, number of children, number of vehicles that pass by the participant’s residence per day, number of vehicles owned, political affiliation, and relationship with local police) would be a significant predictor of privacy concerns.

Methods
Participants
- 92 Males & 110 Females
- Mage = 36.88 (SD = 12.15)
- Participants were recruited through Amazon’s© Mechanical Turk © (MTurk)

Methods
- Participants were first presented an informed consent form and after signing electronically they were presented with the instructions on completing the survey
- The following section of the survey was a hypothetical scenario that read
  “Imagine a situation where your local police department announces plans to use unmanned aerial vehicles (UAVs) to patrol the skies of your neighborhood 24/7 (day and night) every day of the year in order to assist with police activities. These UAVs would fly at various altitudes and provide aerial coverage with video feedback of the entire neighborhoods at all times.”
- In the next section of the survey, participants were then asked to respond to questions focusing on the demographics of the participants, with things such as:
  - Age, gender, income, number of children, number of vehicles that pass by the participant’s residence per day, number of vehicles owned, political affiliation, and relationship with local police
- Participants were debriefed and paid upon completion

References