

What is a gun good for? Esteem and protection in American gun owners

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Abstract

What can we learn from gun owners by asking them about how their guns make them feel? We take a person-centered approach in analyzing a sample of over 4,000 gun owners drawn from a nationally-representative survey frame to model the ways in which owners differ in the esteem they feel their guns provide. We find evidence for four distinct subpopulations of ownership, one which generally disagrees that guns help them to feel esteem (11.4% of the sample); two that generally agree that guns provide esteem, albeit to different degrees (39.8% and 30.2% respectively); and one subpopulation that strongly agrees that guns help them to feel responsible, safe, respected, patriotic, valuable, confident, and in control (18.6%). These subpopulations differ meaningfully in perceptions of the likelihood of needing to use one's gun, in how they think about the nature of responsible firearm ownership, in their actual storage behavior, and they differ in terms of the threats that they believe their guns are able to protect against. These various psychological subpopulations of owners differ far more strongly in their attitudes and behaviors than in their underlying demographics (such as age, gender, ethnicity, education, or urbanicity), reinforcing the importance of understanding gun ownership from the inside out.

Public Significance Statement

There are an estimated 75 million firearm owners in America. How do they understand what their guns mean? Analyzing a large nationally-representative survey of American gun owners, we find evidence for four distinct psychological subpopulations of gun owners – 11.4% of our sample disagree that guns provide them esteem, while 18.6% strongly agree that guns help them to feel valuable. These groups, with their different psychological models of firearms, differ in their understanding of the nature of responsible firearm ownership, the ways that they choose to store and carry their guns, and the entities that their guns allow them to protect against.

Why own a gun? When asked, most contemporary American gun owners say that they own a gun principally for protection - 72% of owners in a recent Pew survey told pollsters that protection was a major reason for why they owned their guns (Shaffer, 2024). And yet, ‘feeling protected’ is no simple thing; psychologists have spent decades modeling the intricacies of how individuals perceive and respond to threats in the world (see e.g., Brandt et al., 2021; Hart, 2014; Reiss et al., 2021; Skinner et al., 2003 for reviews). As ‘protection’ is such a multifaceted construct, we should ask what, specifically, gun owners are protecting themselves against, and how their guns play a role in that defense. That is, what do firearm owners *get* out of their ownership?

One model of protective gun ownership argues that guns help owners protect themselves against threats not just to their physical safety, but also to their fundamental psychological need to stay safe, to stay in control, and to live meaningful lives esteemed by those around them (see Leander et al., 2019; Stroebe & Leander, 2024). In this model (Buttrick, 2020), guns act as a psychological support, helping owners to maintain their sense of overall well-being that would otherwise be threatened by beliefs that the world is dangerous and key social institutions are unwilling or unable to protect them (e.g., Stroebe et al., 2017; Jiobu & Curry, 2001). In the face of these beliefs, guns may be effective in helping owners feel safer (Parker et al., 2017; Shaffer, 2024), feel more in control (e.g., Shepherd & Kay, 2018), and feel like they’re living a life of purpose (e.g., Carlson, 2018; Grossmann & Christensen, 2004; Warner & Steidley, 2022). However, such ownership may come with costs: the cost of vigilance - with owners potentially becoming *more* on guard against the dangers of the world (e.g., Barnhart et al., 2018; Shapira & Simon, 2018); and the cost of disaffection - with owners potentially becoming *more* suspicious of a government they assume to be set on disarming and disempowering individuals, thereby leaving them all the more exposed to those dangers that government doesn’t see fit to protect them against (e.g., Froese et al., 2025; Lacombe et al., 2021).

It is important to note, however, that there are at least 75 million Americans who own a gun (Miller et al., 2022), and it is very unlikely that everyone views their gun ownership through the same lens. In this paper, we investigate this potential heterogeneity, exploring how owners differ in terms of

how guns make them feel, what (and/or who) they think their guns protect against, and how differences in these emotions and beliefs play out in terms of differences in their specific attitudes and behaviors towards their guns. Specifically, we draw attention to the feelings that owners have about what guns *do for them*, rather than what owners themselves *do with* their guns.

To do this, we apply latent profiling to a nationally representative sample of gun owners. Analysis using latent profiles takes a person-centered approach to understanding the interrelationship of variables. Instead of focusing on variables as distinct units and asking how variables interrelate with other variables, a latent profile approach places its focus on patterns of variables *within people* (see Bauer, 2022; Masyn, 2013 for an accessible overview). By looking at patterns of within-person response, this analysis models the prevalence of certain “kinds of people,” which further allows an analyst to investigate what sort of background variables predict whether someone is a certain “kind of person,” and whether a given “kind of person” may think or behave in a certain sort of way. Latent profiles can be a useful complement to the more common variable-centered approaches, especially when it comes to complex interrelationships. For example: instead of trying to model a 3-way interaction to figure out what happens when someone is high in variable X, low in variable Y, and at the median in variable Z, a latent profile analysis would look for the meaningful subpopulations that exist when we jointly consider responses to variables X, Y, and Z. If, then, one of these subpopulations is made up of the “kinds of people” who are high in X, low in Y and median in Z, a latent profile analysis can model the group’s behavior in direct comparison to the other subpopulations in the sample.

American gun ownership is an attractive candidate for latent profiling due to broad diversity in the demographics of ownership, the types of guns owned, choices about gun carrying, and the ways that guns are stored. Indeed, these factors have been the focus of prior latent profiles of American gun owners (e.g., Boine et al., 2022; Bond et al., 2021; Hartman et al., 2025; Schleimer et al., 2020; though see Salhi et al., 2021, who developed profiles based on the perceived risks of ownership). However, these studies have largely looked just at observable characteristics of gun owners, without addressing differences in how owners think about why they own or what their guns mean to them.

Departing from these prior studies on gun *behaviors*, we instead focus on gun *thoughts* and *feelings*. Decades of work in social psychology has mapped the complex relationship between the way that people understand the world they live in and the way they go about living in that world (Fishbein & Ajzen, 1974; see Tormala & Rucker, 2025; Wilson, 2022 for reviews). Two different individuals can bring very different prior expectations to the same object or interaction, and it is those expectations that help to make sense of differences in actions (Granados Samayoa & Albarracín, 2025; Kelley, 1973; Ross, 1977; Walton & Wilson, 2018). We therefore expect that the way that people construe their gun ownership can provide vital information about how they choose to live with their guns.

Critically, this approach pushes us beyond reducing gun owners to their observable, surface, demographic characteristics – instead, we have to actually ask them how they see the world. In this paper, we do exactly that, using a nationally-representative sample of over 4,000 American firearm owners to model how owners think and feel about their firearms, and how those construals map onto their firearm-relevant beliefs and behaviors and the threats that they see their guns as protecting against.

Study 1A: Profiling the Way Guns Feel

Our first set of analyses looks at differences among “kinds of people.” We construct a set of latent profiles based on questions that ask about the esteem (both self-esteem and esteem from others) that owners gain from their firearms. We look to see whether profiles differ in their political conservatism, in their assessment that they’ll need to use their gun to protect themselves from harm in the next year, in their definitions of responsible gun ownership, and in their beliefs about the potential tradeoff between gun storage and gun accessibility. This helps us to know if feelings derived from gun ownership relate to the way that owners think about the practical use of their guns. We then look to see if there are differences in behaviors among identified groups. We test whether owners in various profiles differ in the number of guns owned, rates of carrying a gun outside the home, whether they differ in the proportion of owners that bought their first gun in January 2021 or later (given changing demographics of owners around that time, c.f. Miller et al. 2021), and whether they differ in the way that they store their guns at

home. This helps us to see if our profiles are pragmatically-important - if the psychological support and validation that one gets from a gun is related to the way that one takes - or anticipates taking - actual action with it. Finally, we test whether profiles differ across demographics: age; gender; ethnicity; income; education; household size; number of children in the home; and whether the gun owner lives in a rural, suburban, or an urban locale. This helps us to know if our profiles are more or less reducible to demographic differences (i.e., all men think a certain way), or whether our profiles transcend such basic stereotypes.

Method

Participants

The present study uses data from the 2024 National Firearm Survey (NFS), the most recent iteration of an ongoing nationally-representative survey of American gun owners that addresses the stocks, flows, carriage, and behaviors of contemporary American gun ownership (e.g., Azrael et al., 2017). The NFS has become a vital resource in understanding the contours of gun ownership in America (see e.g., Berrigan et al., 2022; Mauri et al. 2021; Miller et al., 2022; Rowhani-Rahbar et al., 2018; Rowhani-Rahbar et al., 2022). Data collection was conducted in December 2024 by Ipsos, drawing from their nationally-representative (address-selected) KnowledgePanel sample of approximately 60,000 U.S. adults. This probability-sample draws from all addresses in the United States, regardless of their phone or internet access status, allowing for a properly-representative sample of the country. Drawing from the KnowledgePanel sample, the NFS uses a PPS (probability proportional to size) selection, ensuring that the analyzed sample in this project is proportionally-matched to US demographics. See www.ipsos.com/sites/default/files/ipsosknowledgepanelmethodology.pdf for more information on the methodology that Ipsos uses to generate this panel. 21,907 panel members were invited to participate in the NFS and 12,909 completed the survey (a 59% yield). 4,059 participants reported owning a working gun. Participants were not directly paid for their participation; rather, participants in the KnowledgePanel earn points that they can later redeem for cash, merchandise, or sweepstakes entry.

The analytic sample for the present study uses the responses of 4,038 American gun owners who answered the focal questions; median age category = 55-64 years old (1st quartile = 35-44; 3rd quartile = 65-74); 77.9% non-Hispanic White, 8.7% non-Hispanic Black, 7.3% Hispanic; 67.3% male; 42.6% with at least a Bachelor's degree; 30.0% reporting living in an urban area, 30.1% reporting living in a suburban area, and 39.9% living in a rural area. The data collection was judged to be exempt by the IRBs at Northeastern University and Harvard University under DHHS Review Category: EXEMPT, CATEGORY #2(i). See Table S1 in the Online Supplement for participant descriptives.

Measures

To measure firearm owners' feelings about their firearms, we use eight items developed by Mencken & Froese (2019) which ask to what degree owning a gun makes the respondent feel safe, responsible, confident, respected, patriotic, in control of their fate, more valuable to their family, and more valuable to their community (using a 5-point agree/disagree Likert; scale alpha in our sample = .93). See Table S2 in the Online Supplement for the distributions of response to each item and all item intercorrelations. These items index beliefs about a) material benefits of gun ownership (safety), b) self-efficacy (confidence, respect, control of one's fate), and c) one's relationships and purpose in the world (responsibility, value to family and community, patriotism), thereby capturing many of the theorized benefits proposed in the Coping Model of Protective Gun Ownership (Buttrick, 2020), which suggests that using a gun helps some owners to address fundamental psychological needs to feel safe, to feel in control, and to feel that one is living a meaningful, purposeful life (see also Leander et al., 2019 for empirical evidence). In using these items, therefore, we can capture the ways that firearms help owners to feel like they are living worthy lives and are respected by others – in other words, the degree to which guns help support self-esteem (see e.g., Leary & Baumeister, 2000).

To explore differences in *Beliefs*, we include measures of (a) political ideology (a 5-point scale, with 1 = Strong Democrat, 3 = Independent or Other (e.g. Libertarian), and 5 = Strong Republican); (b) the anticipated likelihood that the owner would use their gun(s) to protect themselves from harm during

the next year (a 5-point scale with 1 = Very low chance and 5 = Very high chance); (c) the importance of both “guns kept accessible for defensive use” and “Guns stored locked and unloaded” for how the respondent defines what it means to be a responsible gun owner (a 4-point scale, with 1 = Not at all important and 4 = Very important); and (d) agreement with the notion that if a gun owner has to unlock or load their gun before use, it's no good for self-protection (a 5-point scale, with 1 = Strongly disagree and 5 = Strongly agree).

To explore differences in *Behaviors*, we include (a) whether the respondent purchased their first gun in 2021 or later; (b) whether there was a time in the past 30 days when they had carried a loaded handgun or long gun on their person; and (c) whether, for gun(s) stored at home, all were stored unloaded and locked, any were stored loaded and unlocked, or whether they stored in a mixed fashion: loaded and locked/unloaded and unlocked. See Table S3 in the Online Supplement for selected intercorrelations.

Measures of differences in *Demographic Characteristics* included self-reported age (binned in mostly 10-year intervals, where 1 = 18-25, 2 = 25-34...6 = 65-74, and 7 = 75+), gender (male or female), ethnicity (Non-Hispanic White, Non-Hispanic Black, Hispanic, Non-Hispanic Other, Non-Hispanic Multiracial), household income (binned in mostly \$25,000 intervals, where 1 = Less than \$10,000, 2 = \$10,000 to \$24,999, 3 = \$25,000 to \$49,999...6 = \$100,000 to \$149,999, and 7 = \$150,000 or more); education (1 = No high school diploma or GED; 2 = High school graduate (high school diploma or the equivalent GED), 3 = Some college or Associate's degree, 4 = Bachelor's degree, 5 = Master's degree or higher), household size; the number of children in the home under 17; and whether the owner reported that they lived in a rural, suburban, or urban locale.

Analytic Approach

Prior work using responses to the items of gun esteem that we use to generate profiles took a variable-centered approach, analyzing relationships between a generated scale mean and various attitudes and behaviors. This work suggested that owners who feel more generally empowered by guns (i.e., who agree with items across the board, compared to those with less agreement) are more wary of gun

regulation and more likely to agree that violent action against the government could be justified (Mencken & Froese, 2019); are more likely to express cultural anxieties, such as concerns about American identity and resistance toward immigration; to adhere to stereotypical codes of masculinity (Warner 2020; Warner & Ratcliff, 2021; Warner et al., 2022); and are more likely to say protection is a major reason they own their gun(s) (Mencken & Froese, 2019; Warner & Ratcliff, 2021). Other work has suggested, however, that empowerment should be viewed as a multidimensional construct, one especially-well suited to a latent profile analysis. One recent nationally-representative study of Americans, for example, found that while most owners agreed that guns made them feel safe, only a subset of owners agreed that their guns make them feel more patriotic, respected, in control, and valued by their family and community, and that this smaller group had distinctive beliefs about politics and were more likely to endorse conspiratorial ideation (Froese et al., 2025). Just because someone feels safer because of their gun, it is not *a priori* obvious that they should also feel more patriotic or more valued by their community because of their ownership.

To capture this multidimensionality, for Study 1A, we construct a set of latent profiles based on this question asking how guns make their owners feel. Latent profile analysis (LPA) is a mixture-modeling approach that takes a person-centered (rather than variable-centered) approach to understanding relationships between constructs, identifying patterns of response within a sample, and then classifying people into subpopulations (profiles) based on their particular pattern of responses (see Bauer, 2022; Masyn, 2013). By using a data-driven approach to creating classes, LPA ensures that distinctions between subpopulations align with variability in the sample, without having to resort to arbitrary variable cutoffs for categorization.

In order to map out differences in behaviors and beliefs across the profiles, we used the three-step estimation process of Bolck, Croon, and Hagenaars (BCH; 2004) to test for mean-differences in continuous and binary-variable beliefs across the identified latent profiles, and for categorical variables, we used the DCAT process of Lanza et al. (2013; see Asparouhov & Muthén 2021 for a discussion). This correction process is necessary in latent profile analyses in order to properly account for the ways that

latent profiles categorize people with a degree of uncertainty (see Bakk & Kuha, 2021; Bakk & Vermunt, 2015; Collier & Leite, 2017; Dziak et al., 2016; Nylund-Gibson et al., 2019 for discussions). The BCH and DCAT estimations were conducted in MPlus, via the *MPlusAutomation* package in R. Analysis scripts can be found at

https://osf.io/5p74r/overview?view_only=d5dfad4daa2945f28af8e1f9aca806a1

Results

Profiles

Using responses to the eight-item survey question “Owning a gun makes me feel... safe, responsible, confident, respected, patriotic, in control of my fate, more valuable to my family, more valuable to my community,” we began by creating plausible profile solutions, from which we selected our best-fitting solution (see e.g., Sorgente, et al., 2025; Van Lissa et al., 2024). These initial profile-solutions ranged from 1 to 10 profiles while also allowing item variances, covariances, and means to potentially vary across the profiles. We determined, a priori, to only include models in the final set where the smallest profile contained at least 5% of the sample (see Bauer, 2022; Nylund-Gibson et al., 2023), and models where there were no convergence warnings. The best-fitting model from this pool was selected using an Analytic Hierarchy Process (AHP; Saaty, 1990), computing a weighted average of the support for each model provided by the information criteria, with weights based on simulations conducted by Akogul & Erisoglu, (2016; see also Van Lissa et al., 2024). Using this approach, we ultimately selected a four-profile solution with variances constrained to be equal across profiles and covariances fixed to zero ($-2LL = -36,177.36$, $AIC = 72,440.73$, $AWE = 73,193.69$, $BIC = 72,710.60$, $CAIC = 72,753.60$, $SaBIC = 72,573.97$, $Entropy = 0.89$, $Classification Likelihood Min = 0.91$, $Classification Likelihood Max = 0.97$; $BLRT = 2652.167$, $BLRT p < .001$). See Table S4 in the Online Supplement for the fit statistics of all solutions with no convergence warnings and a smallest profile with greater than 5% of the sample. Model selection was conducted with the *tidyLPA* package in R, and all model analyses were conducted in MPlus.

We created labels for these profiles, both based on the underlying elements most strongly endorsed by respondents in the given profile and informed by prior research with firearm owners. Profiles are shown graphically in Figure 1, with means and standard errors for indicators presented in Table S5 in the Online Supplement.

The first profile (11.4% of the sample) generally disagreed with the idea that a gun made them feel valuable, respected, patriotic, and in-control; and felt neutral about whether guns made them feel safe, responsible, or confident. This pattern aligns with a fairly neutral approach to firearms, rather than symbolic or emotional approach to firearms (Shapria & Simon 2018). Given this orientation toward firearms, we label this profile **Neutral**.

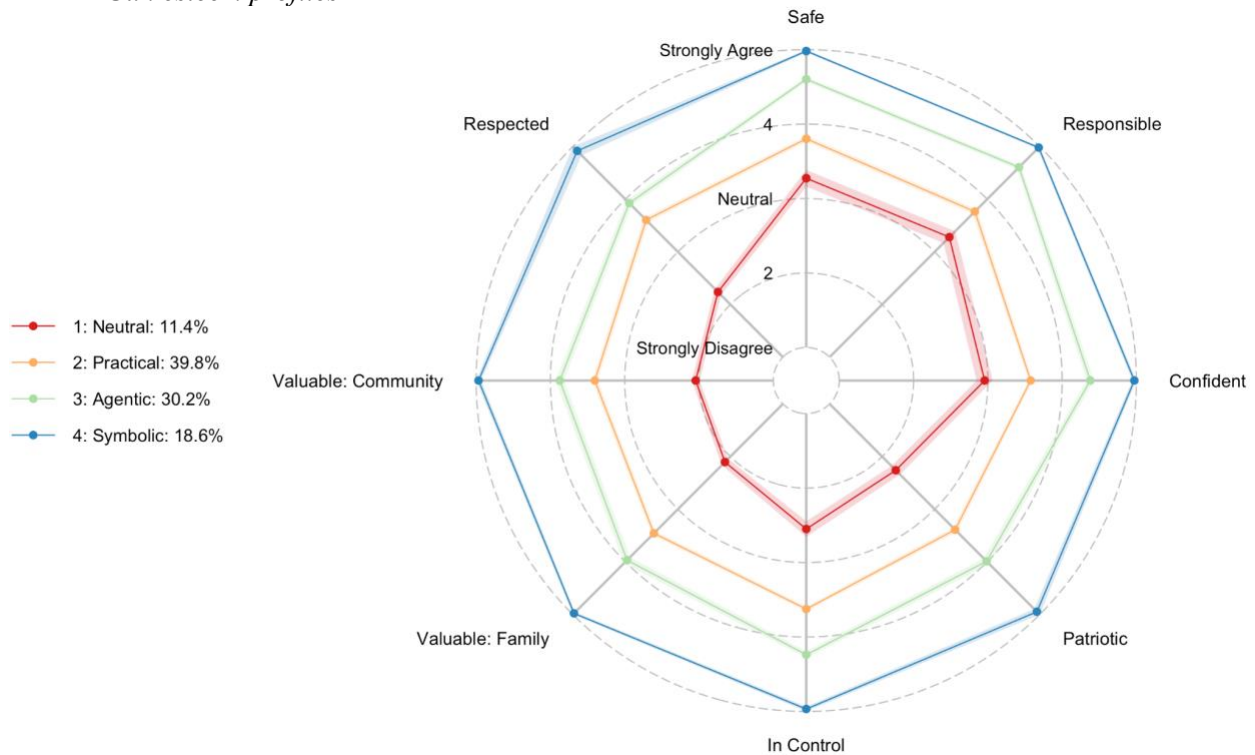
The second profile (39.8% of the sample) moderately agreed that guns helped them to feel safe, in control, and valuable. Given that these owners emphasize the more safety-related (i.e., utilitarian) elements, rather than psychological or identity-related aspects of ownership, we label this profile **Practical**.

The third profile (30.2% of the sample) tended to strongly agree that gun ownership helped them to feel safer, more in control, and more responsible. Given the emphasis of this group on self-efficacy, we label this profile **Agentic**.

Finally, the fourth profile (18.6% of the sample) found a great deal of meaning in their gun ownership, maxing out the scale when asked if guns made them feel more valuable to their community, more valuable to their family, more respected, more patriotic, more in-control, more responsible, more confident, and safer. This aligns with what scholars describe as the symbolic nature of guns (Stroud 2015; Metzel 2019), and what Froese et al. (2025) most recently described as the *sacred* aspect of gun ownership. As such, we label this last profile **Symbolic**.

Importantly, we intend these labels to capture what firearms *mean* for owners more so than *why* they are owned. These profiles do not necessarily capture the reasons why owners purchased a given firearm or what owners do with a gun in their free time; rather these profiles make sense of the psychological qualia of gun ownership.

Figure 1
Gun esteem profiles



Note. Each colored ring represents the pattern of results for a given profile. The percentage of the sample falling within each profile is presented in the legend. Shaded areas indicate 95% confidence intervals.

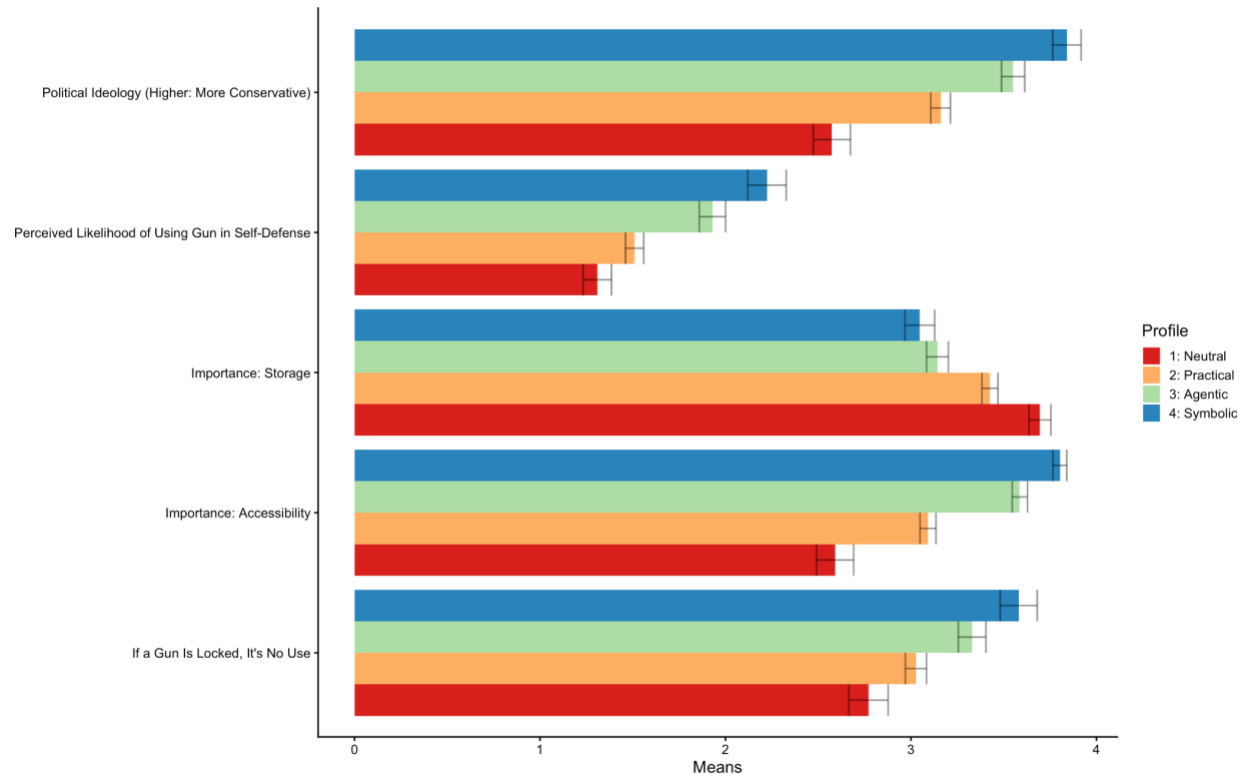
Differences in Beliefs Across Profiles

We next conducted omnibus chi-square tests measuring differences in beliefs across the profiles, with follow-up pairwise tests to understand how the profiles differed from each other. We found that there were significant pairwise-differences in attitudes across the profiles of gun esteem, all p -values presented in text $p < .001$ unless mentioned otherwise. See Table S6 in the Online Supplement for means for all variables across profiles, and see Table S7 for omnibus and pairwise tests for differences in variables

across profiles. We use Cramer's V as a standardized measure of effect size for the chi-square tests in order to provide readers with a sense of the magnitude of the differences between groups: V ranges from 0 = no association to 1 = a perfect association between variables. For instance, compared to **Neutral** firearm owners, **Symbolic** owners were more conservative politically (all pairwise comparisons V 's = .13- .57); more likely to think that they would use a gun in self-defense in the near future (all pairwise comparisons V 's = .09 - .40); placed less importance on storage as a part of being a responsible gun owner (all pairwise comparisons V 's = .13-.37 except for the comparison between Agentic and Symbolic); placed more importance on accessibility (all pairwise comparisons V 's = .17 - .64); and reported greater agreement that if a gun is locked, it's not useful for self-defense (all pairwise comparisons V 's = .09 - .40). Although the **Practical** and **Agentic** profiles look similar in Figure 1, there are some key differences observable in Figure 2. For instance, compared to **Practical** owners, **Agentic** owners place greater importance on firearm accessibility ($V = .29$) and have a higher perceived likelihood of future defensive gun use ($V = .17$).

Figure 2

Differences in attitudes across gun esteem profiles.



Note. Error bars indicate 95% confidence intervals

Differences in Behaviors Across Profiles

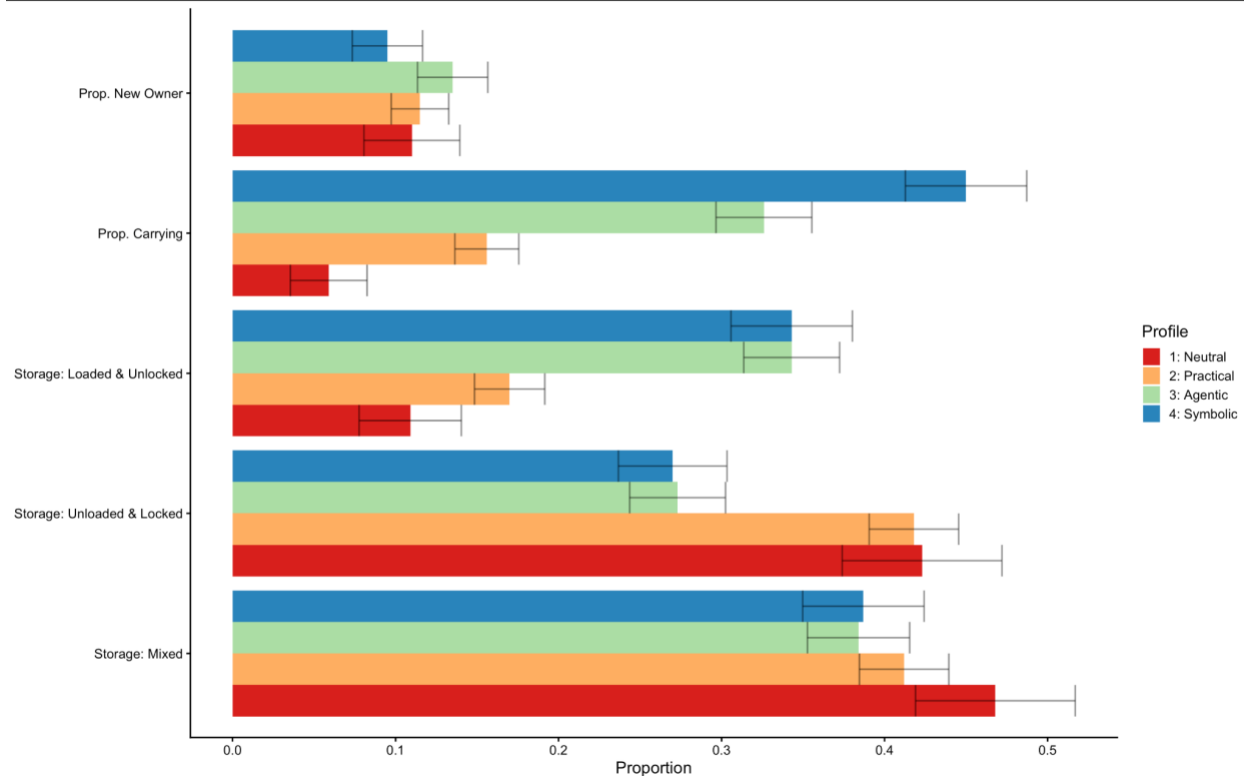
In addition to differing in their worldviews, owners categorized into different profiles of gun esteem also treated their guns in different ways. As can be seen in Figure 3, those who find the greatest sense of meaning in their guns (**Symbolic**) are far more likely than other profile members to report regularly carrying their guns (all pairwise comparisons V 's = .11 - .51). The difference in proportion carrying between the **Practical** and **Agentic** profiles is particularly noteworthy, as it demonstrates that differences in profile membership map on to distinctive patterns of behavior. In addition to the variables presented in Figure 3, we measured the number of guns owned by members of each profile. We find that those in the **Agentic** and **Symbolic** profiles report owning more guns (Neutral: $M = 2.83$ guns, $se = 0.16$; Practical: $M = 4.24$, $se = 0.18$; Agentic: $M = 5.10$, $se = 0.22$; Symbolic: $M = 6.58$, $se = 0.34$; all pairwise tests, V 's = .05 - .29)

We see similar patterns when it comes to the manner in which a person chooses to store their firearms: those in the **Agentic** and **Symbolic** profiles are more likely than those in **Neutral** and **Practical**

profiles to report storing at least one gun loaded and unlocked; and less likely to report storing all their guns locked and unloaded ($V = .09$).

Figure 3

Differences in behaviors across gun esteem profiles.



Note. Error bars indicate 95% confidence intervals

Differences in Demographics Across Profiles

Importantly, these profiles do not simply resolve into differences in demographics. While there are cross-profile differences in the observable characteristics of people in the four different profiles, the differences are generally of a much smaller magnitude than the differences in firearm-related attitudes and behaviors. There are minimal differences in the racial/ethnic composition of the profiles (omnibus $V = .02, p = .007$); minimal differences in the gender composition of the profiles (omnibus $V = .04$); and minimal differences in urbanicity/rurality across the profiles (omnibus $V = .03, p = .002$).

Similarly, we find relatively-minimal differences across the profiles in sociodemographic variables, with little variation in income (omnibus $V = .04$), education (omnibus $V = .07$), household size (omnibus $V = .04$), and number of children in the home (omnibus $V = .03$, $p = .006$). See Figure 5. We find no evidence for differences across the profiles in marital status (omnibus $p = .099$) or homeownership (omnibus $p = .751$).

Discussion

Analyzing the responses of over 4,000 nationally-representative Americans who own guns, we find that there is diversity in the way that guns make their owners feel esteemed. This diversity is reflected in differences in our respondents' attitudes and behaviors, while being relatively weakly related to their underlying demographics. Our best-fitting profile solution suggested four underlying profiles: (1) a Neutral profile (11.4% of the sample) tended to disagree that guns made them feel respected, patriotic, valuable to family or their community, or in control; while being generally neutral on whether guns made them feel safe, responsible, or confident; (2) A Practical profile (39.8% of the sample) expressed moderate agreement with items without heavy endorsement; (3) an Agentic profile (30.2% of the sample) agreed strongly that gun ownership helped them feel safe, responsible, and in control; (4) and a Symbolic profile (18.6% of the sample) that reflected deep emotional and moral significance for firearms.

These differences across profiles were meaningful: we found that people profiled into Agentic or Symbolic profiles were more likely than others to predict that they'd have to use a gun in self-defense over the next year, to think that locking up guns undermined their use for self-defense, and perhaps accordingly, to place greater emphasis on gun accessibility in defining what it means to be a responsible gun owner. The pattern was notably monotonic, with those profiled as gaining more esteem from their guns expressing these attitudes more strongly. These beliefs were reflected in behavior - these owners were also more likely to store at least one gun unlocked and loaded, and more likely to report having carried a loaded gun on their person in the last 30 days. By contrast, those who were profiled as relating to firearms from primarily a Neutral or Practical perspective were more likely to store all their guns locked

and unloaded. Interestingly, we did not find any differences in whether someone was a new owner across our profiles. While some work has found that recent gun owners differ from legacy owners in terms of their motivations for ownership, especially to ward off ideological threats (Ward et al., 2024), we find no evidence for differential new-ownership status across our identified profiles.

While we observed large differences between profiles across our measures of beliefs and behavior, we found limited differences across underlying demographics. Across all our demographic variables, we found no difference across profiles greater than an omnibus effect $V > .07$, and the average (and median) effect was just $V = .04$. By contrast, when it came to the attitudes and beliefs, we commonly saw effects a full magnitude larger (V 's $\sim .20-.30$), and when it came to tests pairwise-comparing the profiles, effect-sizes were even larger. Knowing how one's gun(s) makes a person feel, in other words, helps to understand their attitudes and their behaviors far more than their observable demographic characteristics.

We find evidence that this person-centered profiling approach is statistically-preferable to a variable-centered approach that simply creates a scale mean from the underlying indicators. Exploratory tests of incremental validity comparing how well the two approaches jointly explain our attitudinal variables (i.e., the measures shown in Figure 2) suggest that the latent-profiling approach far outperforms a variable-centered one. See the Online Supplement for more details.

The statistical outperformance of the latent-profile approach over the variable-centered one may be a product of the way that the latent-profile approach can capture non-linear patterns of results, where for example, moving between levels of a construct in different parts of the conceptual space may lead to differences of varying magnitudes in variables being predicted. Variable-centered models, by contrast, need to treat steps between scale points as predictable and consistent. Descriptively, there appears to be two major inflection-points across the profiles, creating patterns that a simple scale-mean approach, which can only model incremental linear effects, would have trouble capturing. The first point of inflection comes across the belief that guns provide any esteem at all. Those in the Neutral profile are the most distinctive in their pattern of beliefs and behaviors (average pairwise $V = .25$ across beliefs and

behaviors, as compared to the average of all other profile pairwise comparisons $V = .15$). This group is always the most cautious around guns: qualitatively the least likely to carry, qualitatively the least likely to store loaded and unlocked, and qualitatively the least likely to think that accessibility is an important part of being a responsible firearm owner. Those who generally disagree that guns provide them any psychological benefits appear notably different than those who are at least in some agreement that guns help them to feel esteemed.

The second point of inflection comes across the boundary between the Practical and Agentic profiles, especially when it comes to storage behaviors and their motivation. Here, those in the two profiles that report getting the most esteem from their firearms (Agentic & Symbolic) store their firearms similarly (with no evidence for a significant difference between them), and in ways quite different from the two profiles that report getting the least esteem from their firearms (Neutral and Practical). Similarly, when it comes both to the belief that one may have to use their guns in the future and the belief that having a gun accessible is an important part of what it means to be a responsible firearm owner, the gap between Practical and Agentic is notably larger than the gap between Neutral and Practical on the one hand and between Agentic and Symbolic on the other: Moving from moderate agreement to a stronger general agreement that a gun can provide psychological benefits may reflect a qualitatively-different set of beliefs about the way a gun is viewed.

Given, then, that knowing what variety of esteem that owners get out of their ownership is important, we next turn to asking how this degree of psychological support relates to the sorts of threats in the world that owners expect to use their guns to defend against.

Study 1B: Profiling the Sense of Protection

In a recent survey, 72% of gun owners reported that protection was a major reason for their ownership (Schaffer, 2024). We explore whether there is heterogeneity in what that protection entails. We analyzed patterns of responses to a question that asked firearm owners whether protection from several different entities was an important part of their ownership. Much like firearm esteem, “protection” is a

similarly multidimensional concept, and different firearm owners can understand what they are (or should be) shielded against in very different ways.

Method

Participants

We use the same sample as for Study 1A.

Measures

To measure firearm owners' perceptions about gun-motivated protection, we used responses to the question "Many people own guns for protection. Thinking about why you own guns, how important are the gun(s) to you for protecting yourself or others against..." with four items: 'Strangers,' 'People I know,' 'Civil unrest,' and 'Use, or threat of use of force, by the authorities,' on a scale of 1 = Not at all important to 3 = Very important. See Table S8 in the Online Supplement for descriptives and intercorrelations of these items.

Analytic Approach

Using same profiling approach as described for Study 1A, we began by generating a range of candidate solutions with between 1 and 10 profiles, while allowing variances, covariances, and means to potentially vary across the profiles. Again, we decided a priori to only include models in the final set where the smallest profile contained at least 5% of the sample and which also had no convergence warnings. We selected the best-fitting model using the AHP algorithm. After building those profiles, we then connected the profiles of esteem generated in Analysis 1 with these newly-generated profiles of protection, using Latent Transition Probabilities - the percentage of participants in each esteem profile that also fall within each protection profile. One can think of this as inspecting the Venn diagrams where the two sets of profiles do and do not overlap. We additionally compared those transition probabilities against the base rate percentages of the sample in each protection profile to identify where the esteem

profiles were disproportionately arrayed within the protection profiles (i.e. where we see more members of a given esteem profile than we would expect based on the underlying distribution of the sample within the protection profiles).

Results

Profiles

The best-fitting solution contained four-profiles, with variances constrained to be equal across profiles and covariances fixed to zero (-2LL = -14,258.58, AIC = 28,563.15, AWE = 28965.7499; BIC = 28707.82, CAIC = 28,730.821 SaBIC = 28634.74, Entropy = 0.871, Classification Likelihood Min = 0.667, Classification Likelihood Max = 1.000, BLRT = 650.27, BLRT $p < .001$). See Table S9 in the Online Supplement for fit statistics for all solutions without convergence warnings and where the smallest profile contained more than 5% of the sample.

Nearly all of the profiles thought of protection against strangers and civil unrest as important. The members of the profiles differentiated themselves primarily in terms of how they additionally thought about the importance of protection against people that they knew and protection against the authorities. Profiles are represented graphically in Figure 4, with means and standard errors for indicators presented in Table S10 in the Online Supplement.

One profile (51.4% of the sample) found protection against strangers and civil unrest to be important, but protection against authorities and people they know to be not particularly important. Because this perspective seems to reflect protection as an active response to a (perhaps unpredictable) threat, we labeled this profile **Responsive**.

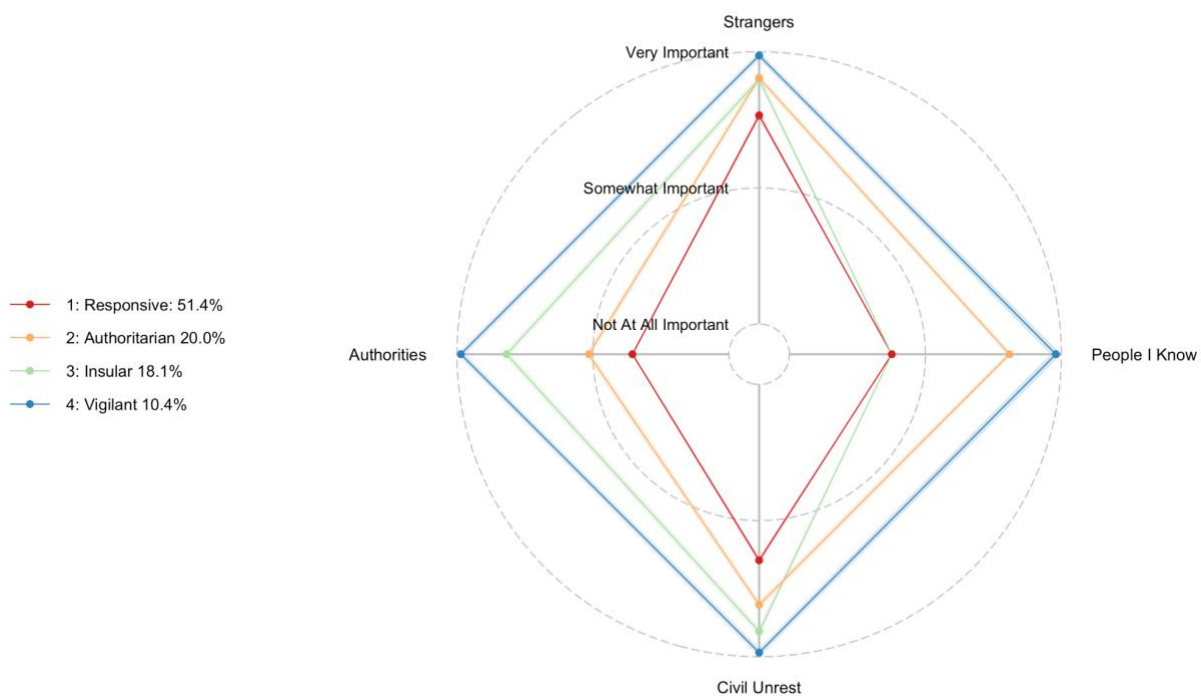
A second profile (20.0% of the sample) found protection against strangers, people they knew, and civil unrest to be important, while rating protection against the authorities as relatively unimportant. We labeled this profile **Authoritarian**, given the use of that term to describe hostility toward out-groups and preference for adherence to authority (Feldman & Stenner 1997; Solt 2012).

A third profile (18.1% of the sample) found protection against strangers, civil unrest, and the authorities to be important, while rating protection against people they knew as relatively unimportant.

Since this group thinks of threats as coming from all outgroups but not from the people that owners know personally, we label this profile as **Insular**.

Finally, a fourth profile (10.4% of the sample) that we labeled as **Vigilant** rated protection against all four sources—strangers, authorities, people they knew, and civil unrest—as very important for why they own a gun.

Figure 4
Profiles of protection



Note. Each colored diamond represents the pattern of results for a given profile. The percentage of the sample falling within each profile is presented in the legend. Shaded areas indicate 95% confidence intervals.

Connecting Esteem to Protection

As can be seen in Table 1, 75.5% of those profiled as **Neutral** when it comes to the way guns make them feel were also in the **Responsive** protection profile, whose protection motivation focused primarily on strangers and civil unrest. This overlap was disproportionately high, 24.09 percentage-points higher than baserate membership in that profile. Similarly, those in the **Symbolic** profile were

disproportionately *unlikely* to belong to that **Responsive** protection profile; just 30.5% of that empowered profile, 20.91 percentage-points below baseline. Instead, those in the **Symbolic** profile were disproportionately likely to be in the **Vigilant** protection profile (21.8% of the esteem profile, 11.32 percentage-points above baseline).

Those who found generally more meaning in their guns (the **Agentic** and **Symbolic** profiles) tended to be more likely than baserate to be in Protection profiles highlighted by the importance of protection against the authorities (3.82 percentage-points and 7.62 percentage-points higher than baseline membership in the **Insular** profile, respectively); while those who found less esteem in their guns (the **Neutral** and **Practical** profiles) tended to find protection against the authorities to be a less important reason for ownership (9.58 percentage-points and 3.68 percentage-points lower than baseline membership in the **Insular** profile respectively; and 6.98 percentage-points and 4.58 percentage-points lower than baseline membership in the **Vigilant** profile, respectively).

Table 1
Interrelationship Between Profiles of Esteem and Protection

Profile of esteem	Responsive (51.4%)	Authoritarian (20.0%)	Insular (18.1%)	Vigilant (10.4%)
Neutral (11.4%)	75.50% [+24.09]	12.50% [-7.53]	8.50% [-9.58]	3.50% [-6.98]
Practical (39.8%)	59.80% [+8.39]	19.90% [-0.13]	14.40% [-3.68]	5.90% [-4.58]
Agentic (30.2%)	44.10% [-7.31]	21.80% [+1.77]	21.90% [+3.82]	12.20% [+1.72]
Symbolic (18.6%)	30.50% [-20.91]	22.10% [+2.07]	25.70% [+7.62]	21.80% [+11.32]

Note: Table-percentages represent the percentage of those in a given esteem profile who are profiled in a given protection profile (i.e., rows sum to 100%). Numbers in brackets indicate the percentage-point difference between baserate sample membership in a given protection profile and the percentage of a given esteem profile within that protection profile

Discussion

“For protection” is the most frequently cited reason for firearm ownership (Schaffer 2024). We find evidence that there is notable heterogeneity as to what, exactly, that protection entails. We analyzed patterns of responses to a question that asked firearm owners whether protection from several different entities (strangers, people they knew, civil unrest, the authorities) was an important part of their ownership. The best fitting latent-profile solution suggested four underlying subpopulations. Nearly all of the subpopulations thought of protection against strangers and civil unrest as important. The members of the profiles differentiated themselves primarily in terms of how they additionally thought about the importance of protection against people that they knew and protection against the authorities. The most common profile (51.4% of the sample), which we labeled as **Responsive**, mostly viewed both protection against known people and the authorities as unimportant, focusing instead on strangers and civil unrest. A second profile which we labeled as **Authoritarian** (20.0% of the sample) added a focus on protection against people that they knew, dismissing protection against authorities as unimportant, while a third profile, which we labeled as **Insular** (18.1% of the sample), added a focus on protection against the authorities, dismissing protection against people that they knew as unimportant. Finally, a fourth profile, which we labeled as **Vigilant** (10.4% of the sample) rated protection against all four potential threats as important reasons for why they owned a gun.

Membership in these profiles of Protection were meaningfully-related to membership in profiles of esteem. The psychological affordances of gun ownership help to understand how owners use their guns to navigate specific threats. Matching findings above about the potentially-qualitatively-different nature of the profiles of esteem, we again find evidence for two important gaps across our profiles, one comparing those in the Neutral esteem profile to everyone else; and one comparing those who feel the most esteem (Agentic and Symbolic) against those who feel the least (Neutral and Practical). Those who reject the premise that guns are empowering (those profiled in the **Neutral** esteem group) were disproportionately likely to be profiled as thinking that guns primarily protect against strangers and civil unrest.

Those profiled as feeling that a gun allows them to feel esteem in a broader sense (i.e., falling into the Agentic or Symbolic gun-esteem profiles), are more likely to be profiled as taking a more expansive view of the sorts of threat that they think the gun can help them to take on (i.e., leaning more toward the Vigilant profile). Finally, here we find that those who think that guns are extremely important in supporting their psychological well-being (those profiled in the **Symbolic** group) were disproportionately likely to be profiled as thinking that guns are important in protecting against the authorities (i.e., membership in the **Insular** and **Vigilant** profiles).

It may alternatively be that owners motivated by the widest array of potential safety threats construe their guns as having both deeper importance and broader significance, given the increased roles that their guns play in securing their safety. While the suggestion is admittedly speculative, nevertheless, the patterning of gun esteem and protective motivations—and their overlap—points to continued investigation of the ways owners situate their ownership in broader visions of society. We return to this point in the General Discussion below.

General Discussion

What can be learned about gun owners by asking them about the way that guns make them feel? We argue: quite a lot. We find considerable variation among owners in the ways that they think about what their guns allow them to do or to be, and we find a strong association between knowing how a person thinks about their guns and what they do with them. Intrapsychic modeling of how a person understands the psychological affordances that a gun provides is vital in understanding how they go about using and treating that gun in their everyday lives. We further find that these patterns of beliefs about guns do not simply reduce to demographic variables - only finding small differences in gender, age, ethnicity, wealth, education, family size, or where a person lives. Gun ownership is both not-monolithic, and hard to stereotype from external cues.

We asked our respondents if a gun made them feel safe, responsible, confident, respected, patriotic, in control of their fate, more valuable to their family, and more valuable to their community

(Mencken & Froese, 2019), a set of items that taps into support for fundamental psychological needs to feel safe, to feel in control, and to feel that one is living a meaningful, purposeful, esteemed life with connection to others (see Buttrick, 2020 for a theoretical model of protective gun ownership along these lines). In identifying subpopulations of owners based on their pattern of responding to these items, we found a small portion of owners (11.4%) essentially rejected the premise, reporting that guns don't really help them with any of these things. Of the remaining owners, the differentiator was the importance of some dimensions of empowerment over others – is gun ownership primarily a tool for ensuring safety; for enabling one's autonomy; or for enhancing one's overall sense of value and meaning, both individually and socially?

These feelings and meanings appear to differentiate attitudes and behaviors around gun ownership, and appear to do so in a more complex way than would be revealed by simply taking a mean of the underlying indicator variables. Those who tie their fundamental identities most closely to their gun ownership (those in the **Agentic** and **Symbolic** esteem profiles) are more likely to think that they will need to use their gun in self-defense, are more likely to privilege accessibility over storage in describing what it means to be a responsible gun owner, are more likely to report having carried a loaded handgun in the last month on their person, and are more likely to have at least one gun stored unlocked and loaded. Those profiled as having a more instrumental affiliation with firearms (especially those in the **Neutral** esteem profile), by contrast, are more likely to think that storage is an important part of being a responsible owner, and are more likely, themselves, to store all their home guns locked and unloaded. Descriptively, it seems as if there are two key distinctions across our profiles in the way that they differ in their gun-related beliefs and behaviors: one separating out those in the Neutral profile, who find no esteem benefits from their guns from those profiles that agree at least somewhat that guns help them to feel valuable in some way; and a second distinction separating out those who agree or agree strongly that guns help with their esteem (those in the Agentic and Symbolic profiles). Future work investigating whether these distinctions are qualitatively different or simply differences in magnitude of feeling, especially work anchored by in-depth interviews with owners that allows for the richness of a worldview

to be fully-expressed, will be vital in designing messaging approaches tailored to different kinds of gun owners.

Firearm owners differ meaningfully in how their guns make them feel, and what they think their guns protect them against. Although most owners thought of protection against strangers and civil unrest as important, they differentiated themselves primarily in terms of how they additionally thought about the importance of protection against people that they knew and protection against the authorities. The owners we labeled as **Responsive** viewed both protection against known people and the authorities as less important than protection against strangers and civil unrest. Those we labeled as **Authoritarian** emphasized protection against people that they knew more so than protection against authorities; a third profile, which we labeled as **Insular** prioritized protection against all elements except people they knew. A fourth profile, which we labeled as **Vigilant**, rated protection against all four potential threats as important reasons for why they owned a gun.

These various dimensions of empowerment (or lack thereof) from one's gun ownership seems also to be related to the threats that one thinks their gun can reasonably protect against. Just like "esteem," "protection" means more than one thing, and owners vary in the profile of threats that they think are important motivators for their ownership. There is no *a priori* reason to think that knowing whether a gun helps someone to feel esteemed would be important in knowing whether they view a potentially-violent government as something they'll need their gun to protect against, and yet we find that there is a strong linkage. Those who are profiled as tying their esteem more closely to their gun ownership are more likely to be profiled as reporting that they consider potential government tyranny as an important threat for their guns to protect against, while those who are profiled as feeling less social and psychological reinforcement from their guns are simply focused on threats from the unknown or unpredictable. Perhaps alarmingly, all four profiles of protection that we identified thought of protection against civil unrest as an important reason for their ownership, suggesting how thoroughly gun ownership has become tied to broader political arguments and issues of self-governance (see, e.g., Lacombe et al., 2022; Okada &

Buttrick, 2025; Simonson et al., 2024; and see Losee & Buttrick, under review, for explicit tradeoffs between guns and civic engagement in the face of threat).

Recent papers have shown that there was a surge in new gun ownership that occurred around the events made up of the Covid pandemic, the January 6th, 2021 insurrection at the US Capitol, and the Black Lives Matter protests, and their collective aftermaths (Miller et al., 2022). Some scholars have suggested that these new gun owners, who were more likely to be non-white and female, might differ from longstanding owners with respect to their reasons for gun ownership (for example, Ward et al. 2024 find that 85% of new gun owners assigned some degree of importance to owning firearms to protect against ideological conflict compared to 56% of gun owners who owned guns prior to 2020). We find, with respect to the way that guns help people to feel esteem, that the proportion of new gun owners in each of our esteem profiles is similar, although the proportion of new gun owners among Symbolic gun owners is lower than among Agentic owners.

Limitations and Constraints on Generality

We focused on one plausible operationalization of the ways that owners feel about their guns, but it is entirely possible that alternate measurement approaches would produce different results. Latent profile analyses are only able to work on the items that they are given; questions that probe these issues in different ways would produce different subpopulations. Our data are cross-sectional, and therefore we are unable to make claims about the temporal priority of our constructs. We are also aware, of course, that these all rely on self-report data. Communicating with researchers about potentially-sensitive aspects of one's gun ownership may be a fraught enterprise for some people, especially if they do not trust that the researchers in question will treat their responses respectfully. If some groups are warier of researchers than others (such as conservative Republicans), they may systematically mask their true attitudes or choose not to participate, thereby biasing population estimates (see Urbatsch, 2019). One-on-one or small-group interviews, in which researchers can take more time to establish their trustworthiness bona fides and therefore elicit more open or vulnerable responses may be able to address this worry.

Nevertheless, we do note the quality of this probability-based sample - the completion-rate for this survey (64%) is higher than those of typical opt-in online surveys (which tend to have completion rates of around 10%; Callegaro & DiSogra, 2009), and is additionally higher than prior CDC random-digit-dial surveys of gun-ownership behavior (i.e., the ICARIS-2, which had a 48% completion rate; United States Department of Health and Human Services, 2011).

Therefore, we believe that these results should generalize to other self-report surveys across the spectrum of gun owners in America at this moment in time. Gun ownership in America may be continuing to shift its borders and boundaries, however (e.g., Ward et al., 2024; Yamane, 2022) and so it is entirely-possible that the future distribution of attitudes among gun owners may look very different than they do in the present. Importantly, however, while we feel confident in generalizing to other Americans, we do not feel confident generalizing to non-American settings. American gun ownership is distinctive in many ways, and citizens of other countries, with different histories and regulations around ownership, are likely to have different understandings of what guns can do for them (see e.g., comparative psychological differences around gun ownership in Switzerland, Stroebe et al., 2024; in Australia, Kohn, 2004, and in France, Spain, & Greece, Syropoulos et al., 2021).

Conclusion

We find that differences in the meanings that American gun owners make from their guns—far more than demographic differences—are associated with what they think guns are useful for and the threats they envision facing. Knowing what people think and feel is key to understanding what they do, especially in a realm as complex as gun ownership. Without a guide to the inside-view of gun *meaning*, conversations about gun ownership, and about how to motivate change in gun-related safety behaviors, are less likely to succeed.

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