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Making Sense, Making Choices: How Civilians Choose Survival Strategies during Violence

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How do ordinary people choose survival strategies during intense, surprising political violence? Why do some flee violence, while others fight back, adapt, or hide? Individual decision-making during violence has vast political consequences, but remains poorly understood. I develop a decision-making theory focused on individual appraisals of how controllable and predictable violent environments are. I apply my theory, situational appraisal theory, to explain the choices of Indian Sikhs during the 1980s–1990s Punjab crisis and 1984 anti-Sikh pogroms. In original interviews plus qualitative and machine learning analysis of 509 oral histories, I show that control and predictability appraisals influence strategy selection. People who perceive "low" control over threats often avoid threats rather than approach them. People who perceive "low" predictability in threat evolution prefer more-disruptive strategies over moderate, risk-monitoring options. Appraisals explain behavior variation even after accounting for individual demographics and conflict characteristics, and also account for survival strategy changes over time.

INTRODUCTION

In the 96 hours after Prime Minister Indira Gandhi was assassinated in Delhi on October 31, 1984, a wave of pogroms against India's Sikh religious minority swept across the country. Mobs armed with lathis [staves], iron rods, and kerosene quickly claimed 3,300 lives across India, with 2,800 people dead in Delhi alone.[1] Displaced-person camps soon appeared around the capital to house thousands who had lost homes, shops, or relatives to the mobs. Up to 13% of Delhi's Sikh population permanently left the city (Kaur 2006), many resettling in Punjab (a Sikh-majority state) or emigrating to diaspora communities in Anglophone countries.

Two women, Sukhwinder and Inderpal, lost relatives in the pogroms.[2] In 1984, they lived in Sagarpur and Palam Colony, respectively, two low-income neighborhoods near the Delhi Airport that mobs targeted with extreme violence. Both came face-to-face with mobs on November 1, but their stories diverge from there. In the morning, Sukhwinder's father returned home and warned that a mob was approaching, "shouting" and "hitting" people found outside. He told Sukhwinder and her husband to hide, "close the house" and not "pick up anything like lathis" or provoke the mob. When mobs reached their house, Sukhwinder's male relatives were dragged out despite raising no provocation. Her father, husband, teenage son, and brother were beaten to death. Sukhwinder was beaten but survived; she continued hiding as the pogroms went on, and still lives in Delhi today.[3]

About 3 kilometers away, Inderpal and her family chose a different course of action. As mobs attacked the neighborhood gurdwara [temple], her father and brothers joined neighbors to "take care of ourselves," raising kirpans [daggers] in a fight that lasted "hours." Afterward, Inderpal's father was taken, doused with kerosene and "white powder," probably phosphorus, and burned to death. Inderpal's neighbors quickly arranged to take the surviving family out of Palam by car, disguising Inderpal's brother in a "frock," so mobs would think he was a woman. Inderpal later migrated to Punjab.[4] Why did one family stake their survival on hiding, while the other first fought back and then left Delhi entirely?

Ordinary people often make extraordinary, wrenching choices while facing violence. In popular imagination, these unlucky people are sometimes depicted without agency: swept along in currents determined by their backgrounds, the resources they have, or patterns of violence around them. In many types of political violence, though, there is substantial variation in the paths that similar people choose. Within neighborhoods or even households, people choose different strategies of survival (Finkel 2017; Kaplan 2017). Some flee, while other purportedly similar people try to fight back, hide, or adapt to violent environments.

This article is about how civilians like Sukhwinder and Inderpal choose survival strategies during sudden,

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[1] Sikh activists argue that casualties (Government of India 2000) are under-counted.
[2] These are pseudonyms. See Section C of the Supplementary Material (SM.C) on protecting respondent privacy.
[3] 1984 Living History Project, Case 507.
[4] 1984 Living History Project, Case 489.

intense political violence. I develop and test a theory—situational appraisal theory (SAT)—focused on variation in the judgments people make during violence. SAT provides a new way to explain civilians' behavior when directly exposed to relatively sudden, fast-evolving political violence. It assumes that people have no formal, modern military training, that they are able to make their own strategy decisions during violence, and that they prioritize their *own* survival when doing so. I apply SAT to explain behavior during the 1984 anti-Sikh pogroms in India and later insurgency in Punjab, different theaters of a decade-long conflict that falls within the scope conditions enumerated above. Using original interviews and systematic multi-method analysis of hundreds of oral histories, I show that people's survival strategies depend on two appraisals: a sense of how much *control* they have over threats, and a sense of how *predictable* the evolution of violence is.

Situational appraisals are a new explanation for decision-making during high-intensity, fast-evolving violence, but they reflect fundamental political science concepts: control appraisals are related, for example, to assessments of relative power (Dahl 1957). Predictability appraisals are a type of judgment about uncertainty (Jervis 1976, 105). These fundamental concepts help explain the choices that individuals make in pursuit of safety: high control appraisals (perceptions of relative power) lead people toward strategies that involve "approaching" the source of threat. High predictability appraisals (perceptions of un/certainty in one's environment) lead people to prefer risk monitoring strategies instead of behaviors that mitigate danger but majorly disrupt their lives. People who appraise (perceive) their situation as neither controllable nor predictable are more likely to flee violence; people are more likely to fight when they feel they have control, but perceive low predictability. People who appraise threats as un-controllable but predictable are more likely to adopt hiding strategies, and people who appraise threats as both controllable and predictable often adapt in place.

The article makes two contributions to political science scholarship. First, SAT accounts for additional variation in civilian behavior, beyond what existing theories explain. Appraisals explain (1) behavioral differences between apparently similar people and (2) change in behavior over time. Most previous work on forced migration, participation in violence, or adaptation focuses on the structure of communities, economies, and conflicts. These concepts are operationalized as economic status (Adhikari 2013; Blattman and Annan 2016), identity and social position (Schon 2020b; Shesterinina 2021; Steele 2009; Wood 2003), the character and intensity of violence (Kalyvas 2006), pre-conflict political affiliation (Balcells and Steele 2016), risk tolerance (Davenport, Moore, and Poe 2003; Mironova, Mrie, and Whitt 2019), or community structure (Arjona 2016; Finkel 2017; Petersen 2001). Adding situational appraisals to this structure-focused list helps account for overlooked variation *within* structurally similar groups. Situational appraisals also provide leverage to explain why people change strategies over time, a process that has been relatively under-explored.

Second, the article identifies connections between research focused on strategic, economic, and social causes of phenomena like migration and participation in violence (cited above), and other research focused on long-run social (Bauer et al. 2016; Hartman and Morse 2020; Vinck et al. 2007; Zeitzoff 2018) and political consequences (Bateson 2012; Milliff 2023a) *after* violence. SAT connects these literatures by showing how civilians' efforts to interpret experiences of violence shape their behavior *during* conflict, not just after. The interpretation and meaning-making processes that catalyze post-conflict political and social change are often the same interpretation processes that shape strategy decisions during conflict.

The article proceeds in seven sections. The next section develops SAT and presents a new typology of survival strategies. The section that follows introduces the Punjab Crisis and describes data sources. The section "Using Oral Histories to Study Behavior" introduces a new mixed-methods approach to analyzing oral histories, which I use to measure situational appraisals. In the "Results" section, I apply the new method to show that *control* and *predictability* appraisals during violence are systematically associated with choosing particular strategies of survival. I expand these results in the "Interview Evidence" section with evidence from interviews conducted in India and with Sikh emigrants in California. I conclude by discussing research and policy implications.

SITUATIONAL APPRAISAL THEORY

A Typology of Behavior during Conflict

Most literature on survival strategies like migration, community resilience, collaboration, or self-defense frames survival strategies as binary choices. Only a handful of recent studies portray strategy choice as a multinomial outcome.[5] I develop a typology of survival strategies that better reflects the *range* of options people have during violence.

I identify four strategy categories available to people facing violence. Each category is almost always *available* in a literal sense, even if it appears unattractive, unlikely to succeed, or life-threatening.[6] First, people can choose aggressive, "fighting" strategies. Mobilization into formal armed groups is one widely studied fighting strategy, but fighting also includes less organized *violent* resistance like: joining local self-defense patrols, guarding ones' dwelling, or physically resisting attackers. Second, people can choose evasive, "fleeing" strategies. The most extreme example of fleeing—international displacement—is widely studied, but

[5] Barter (2014), Jose and Medie (2015), Finkel (2017), Kaplan (2017), Arjona (2017), and Schon (2020b) conceptualize choice among multiple strategies. Figure SM.14 compares their typologies to mine.

[6] Following Finkel (2017), I argue that survival strategy is a choice, even if some alternatives appear unreasonable. People may describe strategies as "unavailable" as shorthand for "too dangerous to consider."

fleeing also includes displacement over shorter distances. I categorize relocation to evade violence as "fleeing" unless it is explicitly limited to a period of hours or days—that is, to avoid a single raid. Third, people can adopt avoidance-in-place strategies, which I term "hiding." Hiding receives less attention than other strategies, but hiding actions sometimes appear in concepts like "non-engagement" (Jose and Medie 2015).[7] It includes strategies to reduce threat-exposure and endure danger *in situ* like: physical sequestration, temporary evasion like going into the forest for shelter during an attack,[8] modifying travel routes, or shedding visible ethnic and religious identifiers to blend in. Finally, people can choose adaptation strategies, engaging with the sources of threat to manage danger *in situ*.[9] Adaptation is associated with concepts like community resilience-in-place (Kaplan 2017), "nonviolent engagement" (Jose and Medie 2015), "non-escalation" (Krause 2018), or "non-cooperation" (Masullo 2021). It includes behaviors like collaborating with aggressors/sources of threat, bargaining, or purposely ignoring violent threats.[10]

I identify two dimensions of variation that distinguish the survival strategies: directional orientation toward threat and how disruptive the strategy is—that is, how much it deviates from baseline, normal behavior. First, orientation separates strategies that entail engaging with or physically approaching threats (adapting, fighting), from strategies that decrease exposure to or physically withdraw from threats (hiding, fleeing). Second, disruptiveness distinguishes extreme strategies to permanently remove threats of violence (fighting, fleeing), from moderate attempts to persevere (adapting, hiding).[11] The resulting typology has empirically exhaustive, conceptually exclusive categories (Table 1). Any strategy fits in precisely one category, each category represents a unique orientation–disruptiveness combination. This simple typology occludes some conceptual distinctions in existing literature, and highlights other distinctions the literature largely ignores. The "fleeing" category, for instance, is agnostic about distance, even though internal and international migration are certainly different. I combine them, assuming that differences between domestic and international destinations —including destination-specific "pull factors" (Steele 2009)—are background considerations when a person is deciding *whether* to flee physical threats. In another example, my typology separates components of civilian resilience-in-place based on whether they physically approach or avoid threats.

TABLE 1. A Descriptive Typology Comparing Survival Strategies

		Orientation to threat	
		Avoid	**Approach**
Disruptiveness	**Extreme**	Flee	Fight
	Moderate	Hide	Adapt

Situational Appraisals and Strategy Selection

What explains variation in the survival strategies people adopt during violence? Structural theories from above-cited literature explain some variation, but fall particularly short for explaining why nominally similar people often pursue different strategies. I argue: variation in the way people interpret violent environments influences everyone's decision-making, and explains why people may adopt different survival strategies during a shared experience. During violence, people have to engage in interpretation—that is, make quick and sometimes subconscious estimations about the state of the world around them—in order to form judgments about the dangers they face which in turn informs their behavior. Similar, reasonable people often disagree on how to interpret stimuli in their environment (Elster 2011). In uncertain, stressful, urgent situations during violence, disagreements are especially intense (Race 1972). I argue that people use appraisals—interpretations of their environment —to form judgments about their situation and choose a survival strategy. Different survival strategies appear more attractive/ideal to people who interpret the situation differently.

I focus on two appraisal dimensions that are well-suited to explain variation in the typology (Table 1).[12] First, I argue individual appraisals of control over a threat (judgments about individual agency to mitigate threats) influence preferences about "approach" versus "avoidance" strategies. This builds on political science intuition about relative power, and psychology findings from the appraisal-tendency framework showing that control appraisals modulate simulated approach/withdraw behaviors (Frijda, Kuipers, and ter Schure 1989; Lerner and Keltner 2000; see SM.J). Second, appraisals of how foreseeable/predictable threat trajectory is (how uncertain the evolution of threat is) influence preferences about strategies of endurance via behavioral change versus extremely

[7] SM.J compares "non-engagement" and hiding.

[8] Going to the forest is fleeing only if there is no plan to return. Marra (2013) illustrates the distinction in a novel.

[9] Some work (SM.J) argues that migration and violent resistance have *adaptive effects*. Here, adaptation means dealing with threats in-place through voluntary, non-violent, but not always collaborative interaction.

[10] Survival sex or "girlfriending"—which Utas (2005) and Jose and Medie (2015) call an expression of agency—would be adaptation: a non-violent approach strategy. The practice, though, is not mentioned by respondents in this article.

[11] I elaborate in SM.J.

[12] Other appraisals/dimensions like responsibility attribution, danger, or attentional activity are important parts of experiencing violence, but unlikely to shape preferences about threat orientation and tolerance for disruptive action (Lerner and Keltner 2000; Smith and Ellsworth 1985). I chose control and predictability appraisals deductively, based on psychology findings.

disruptive attempts to mitigate threats. This builds on political science and psychology intuition about the connection between "unexpected uncertainty" and larger-magnitude changes in behavior (Mehlhorn et al. 2015; Scott 1976; Yu and Dayan 2005). Predictability influences judgments about whether calibrating behavior modifications can keep a person safe without totally upending their lives, or whether they need to take drastic, destabilizing action—guarding against the worst imaginable outcomes of violence.

Control appraisals answer the question: can I change my environment in safety-enhancing ways? Control appraisals are inward-looking assessments about agency versus specific threats.[13] People who think they have control to mitigate threats or defend themselves should prefer approaching the threat—wading deeper into danger—because they believe they are *not* powerless, and can enhance safety by acting against the threat. In the 1984 pogroms, some people reported high control appraisals because they perceived their locality to be defensible or because they had access to basic weapons like swords—even if the swords went unused. Others described high control appraisals from less tangible sources, like a feeling of anger, or faith in God's protection.[14] People experiencing low control appraisals, conversely, focused on things like the enemy's relative strength, and feeling powerless.

Predictability appraisals answer the question: can I forecast how threats in my environment will evolve? Predictability appraisals are outward-looking assessments that have implications for making plans; they reflect people's confidence in forecasting the sociopolitical weather. People with high predictability appraisals expect they can calibrate behavior modifications to stay safe without over-reacting. Identifying patterns in violence (such that threats can be "seen coming") makes moderately disruptive, risk-managing strategies more attractive than actions that deviate immensely from normal behavior. People with high predictability appraisals talk about "rules" in violence. They use prior experience or social cues to interpret patterns in violence, and they describe contextual features (like religious demography, in the 1984 pogroms) that could be benign or helpful. People experiencing low predictability focus on how little they know about violence or how illogical it seems. Many describe developments as sudden or surprising.[15]

Appraisals do not always move together. People experience "high" control with "low" predictability, or vice versa.[16] A person might believe threats are unpredictable, while remaining confident they can mitigate those threats if necessary. Conversely, a person could feel deeply powerless to confront threats, but simultaneously somewhat confident in their ability to predict how those threats will act. These appraisal combinations are plausible during violence, and may be common in some circumstances.

I argue that control and predictability appraisals interact to make one survival strategy category appear more attractive than the rest. People who appraise "high" control and "high" predictability should prefer adaptation, a moderately disruptive/approach strategy. They might actively engage with threats by bargaining or collaborating. People with "high" control appraisals and "low" predictability appraisals should prefer fighting. They might join neighborhood self-defense, or attack the threat directly. People with "low" control appraisals and "high" predictability appraisals should prefer hiding, the moderately disruptive/avoid category. They might minimize threat exposure by physically hiding indoors or trying to obscure their group identity. Finally, people with "low" appraisals of both dimensions should prefer extremely disruptive/avoid strategies: fleeing. Table 2 depicts the theory.

SAT differs from other "interpretation-based" frameworks, including narrative- and risk-based theories. Schon (2020a; 2020b) and Rosen (2017) posit that "narrative rupture," occurring when events violate people's narratives for coping with violence, leads to migration. Narrative explanations generally focus on past–present continuity, emphasizing the psychological importance of being able to use past events to make accurate predictions. SAT, in contrast, emphasizes predictability of violence—a subset of general predictive accuracy that measures how well people can prospectively generate forecasts about danger using whatever information is available.

Risk theories argue that decisions about migration and resistance depend, broadly, on whether a strategy's risk exceeds a person's individual tolerance level (Davenport, Moore, and Poe 2003). Mironova, Mrie, and Whitt (2019) and Young (2020), for example, both operationalize risk tolerance as "self-efficacy," a personality trait somewhat related to situation-specific "control" appraisals. They find results consistent with one dimension of SAT: control (risk tolerance) regulates avoidance/approach behavior. SAT differs in two ways. First, more narrowly specified variables for control and predictability enable SAT to do things like predict how consequences of low predictability appraisals vary based on control levels, for example. Second, using two appraisal dimensions allows SAT to account for more real-world behavior options than univariate theories.

Appraisals are psychological variables, but SAT is fundamentally political because of the way appraisals are formed and the effects they have. First, appraisals reflect how people interpret clearly political inputs like distribution of relative power/resources, social hierarchy, and characteristics of violence. Appraisals matter because different individuals often interpret the same political "facts" differently. Second, SAT explains

[13] SM.J compares this to concepts like "locus of control."
[14] This respondent explained: "We are immortal….We have no fear if we would be attacked." Mr. Singh F, interviewed Delhi, March 2020.
[15] "High" predictability does not imply a benign environment. See the scope conditions.
[16] In data analyzed below, appraisals are slightly negatively correlated. In other violent contexts, we might expect feelings of agency and certainty to be positively correlated because appraisals can influence each other; they are different judgments about the same information.

TABLE 2. Situational Appraisal Theory Predictions for Survival Strategy Preference

		Sense of control	
		Low	**High**
Predictability	**Low**	Flee	Fight
	High	Hide	Adapt

variation that is inherently political. Choices to fight, flee, hide, or adapt can change the course of conflict and affect post-conflict politics (Balcells 2018; Greenhill 2010; Steele 2009, 427). Political elites sometimes try to shape appraisals directly, encouraging behavior that fulfills their strategic aims. Finally, control and predictability appraisals correspond to important independent variables in political science research. Control appraisals are conceptually similar to relative power, which matters in many areas of political science (Fearon 1995; Moore 1966). Predictability appraisals mirror uncertainty estimates, which also feature prominently in the literature (Schedler 2013). SAT focuses on variation in how people perceive or estimate these fundamental concepts.

Sources of Situational Appraisals

How do control and predictability appraisals form? Appraisals are outputs of a dimension-reducing process for the information inputs available in a conflict environment. They aggregate information from a person's immediate surroundings, their material and social milieu, beliefs, and memories of relevant experiences. Many variables from social, economic, or environmental theories of civilian behavior shape appraisals.[17] Appraisals are not random or orthogonal to a person's circumstances. Violence intensity, resource distribution, and identity shape appraisals. Understanding the link between these variables and appraisals could help explain the mechanisms behind phenomena like sex differences in violence participation (McDermott 2015), or the connection between resource access and migration (Adhikari 2013). *How* structure matters depends on how it is interpreted.[18]

Generally speaking, though, a given information set will not guarantee uniform appraisals. Information needs to be interpreted to become useful (Jervis 1976), and interpretations made by similar, reasonable people can vary widely. Take resource access as an example decision-making input. Conflict scholars often focus on how resources are spent/consumed: does a family have enough liquidity to migrate suddenly? Is their dwelling secure? These are important considerations, but resources also shape decisions in other ways, like by affecting cognition: resource deprivation impedes information processing and judgment (Mani et al. 2013). Resources also interact with other inputs, like beliefs about violence, perhaps making wealthier people expect to be targeted. In certain situations, the influence of resources might be overwhelmed by other inputs like identity. Violence intensity, another example input, likely shapes population-average control appraisals—people may have lower control appraisals during artillery attacks versus criminal violence, for example—but even massive conventional bombardment must be *interpreted*, and some variation in control appraisals likely persists.

In analyses below, controlling for canonically important inputs—identity, violence intensity, and resource access—does not explain the association between situational appraisals and survival strategies during the 1984 anti-Sikh pogroms. Focusing on appraisals in addition to structural conditions—*outcomes* of individual interpretation in addition to *inputs*—helps explain behavior patterns that structure-only models do not capture.

Some variability in appraisals likely comes from heuristics of *availability* and *representativeness* (Tversky and Kahneman 1973; 1974). Appraisals may more strongly reflect considerations that are easier to retrieve/generate from memory. They are also shaped by the specific categories or prototypes, formed through prior experiences, that people deploy to interpret new scenarios. Availability and representativeness cause inter-personal variation in (a) what information feeds into an appraisal and (b) the meaning derived from a given piece of information. I do not test these mechanisms directly, but decision heuristics are one plausible pathway for future research into why people reach different appraisals during shared experiences.

For now, I argue that measuring situational appraisals provides more explanatory leverage than either trying to model appraisals directly or continuing to assume that structural factors "speak for themselves" and are interpreted consistently by different people. Below, I use interviews with survivors of violence in India to identify context-specific indicators of control and predictability and create coding rules to measure the appraisals people express (SM.D).

Hypotheses

I derive three hypotheses from the theory. First, higher control appraisals should be associated with a higher probability of pursuing "approach" strategies—adaptation or fighting. Second, higher predictability appraisals should be associated with a higher probability of pursuing "passive" or moderate strategies—hiding or

[17] In SM.K, I use feature selection to show how structural variables contribute to appraisals. After controlling for those variables' direct effects on strategy, however, appraisals are still significantly associated with strategy.

[18] If people's interpretations of their environment are similar, SAT will match structural explanations (see Figure SM.15). If a particular situation led similar people to similar "biases" in information assimilation (Hatemi and McDermott 2016), then their appraisals would be correlated. In other situations though, similar backgrounds explain relatively little about appraisals. There are not strong reasons to expect a consistent pattern across instances of violence. Determining which characteristics of violent contexts promote "agreement" is beyond this article's scope. It is an exciting area for future research.

TABLE 3. Predicted Directions of Appraisal–Survival Strategy Relationships

Hyp. 1 (control level): L → H	Hyp. 2 (predictability level): L → H	Hyp. 3 (interaction level): LL →HH
Increased Adaptation, defending **Decreased** Fleeing, hiding	**Increased** Adaptation, hiding **Decreased** Defending, fleeing	**Increased** Adaptation **Decreased** Fleeing

Note: Ten coefficients in total are estimated to test SAT.

adaptation. Finally, a change in both appraisals, moving from "low control, low predictability" to "high control, high predictability" should be associated with a higher probability of adaptation, and a lower probability of fleeing. I summarize the predictions in Table 3. In total, I predict the sign of 10 appraisal-strategy relationships.

Hypothesis 1. *Higher (lower) control appraisals increase (decrease) the probability that a person selects approach strategies: adaptation or fighting.*

Hypothesis 2. *Higher (lower) predictability appraisals increase (decrease) the probability that a person selects passive strategies: hiding or adaptation.*

Hypothesis 3. *Higher (lower) control appraisals combined with higher (lower) predictability appraisals increase the probability that a person selects an adaptation (fleeing) strategy.*

Scope Conditions

SAT applies best to certain types of people and violence. First, SAT explains behavior during *direct violence exposure.* Strategies chosen by people like survey experiment participants (who face simulated/hypothetical threats) may depend on other factors. Their appraisals may also vary less without the time pressure, uncertainty, and stress of real violence. People facing hypothetical/simulated violence might prefer mixed strategies, simultaneously laying the groundwork for defense and flight while actually pursuing neither. Actual threats makes hedging costlier, disincentivizing a behavior that SAT does not account for.

Second, SAT works better in certain types of violence. This article focuses on sudden-onset communal violence, a type of "direct," collectively targeted political violence (Balcells 2017), where threats come from other human actors, and where survival strategies are chosen on behalf of individuals or small groups. Here, individual interpretation and preference formation are relatively important compared to social influences because sudden changes may preclude social decision-making in the short term, and relatively informal, poorly disciplined, or otherwise inscrutable armed actors create vast micro-level variation in the violence environment that civilians face.[19] As violence wears on, the likely influence of social factors increases, and social influences may even change appraisals directly.

Third, SAT works best for people and with autonomy to enact their own preferences—decisional freedom—which depends on social hierarchy, culture, and the type of violence at hand.[20] Sometimes, group decision-making constrains decisional freedom. Because SAT does not specify a theory of preference aggregation, nor how altruism weighs against personal preferences, it performs worse for collective decisions than individual decisions. Culture also constrains decisional freedom. In patriarchal societies, for instance, SAT might explain men's behavior better than women's.[21] SAT also works better for adults than children. Decisional freedom is also likely higher in the types of emergent, chaotic violence described above than it would be in normal life. Fourth, SAT may not characterize the behavior of trained combatants because most armed group training aims to over-write people's natural responses to danger (Biddle 2004). Fifth, SAT assumes that people are choosing strategies in order to pursue their own survival. Many civilians prioritize their own survival during violence, but not all. If people prioritize other goals—like other people's survival (see SM.I.6 and I.8 for examples of this)—SAT may not explain their behavior.

Finally, like many social science theories, SAT's performance suffers at extreme values of the independent variables. When someone "knows" for certain that they will be killed (an extremely high predictability appraisal and extremely low control appraisal), it seems illogical to prefer hiding over fleeing or attempting to fight. Similarly, in instances when armed groups force people to choose between expulsion and execution—the ideal type of what Steele (2017) calls "political cleansing"—SAT may not apply. Violence that frequently generates this appraisal combination—potentially either direct, targeted violence (i.e., political cleansing) or indirect, indiscriminate violence (i.e., artillery barrages)—is difficult terrain for SAT.[22]

In total, SAT is most useful for understanding the behavior of (1) un-trained civilians, (2) directly exposed to (3) relatively sudden and loosely organized violence, (4) able to make their own strategy decisions, and (5) pursuing their own survival. In the remainder of

[19] This describes many violence types beyond pogroms. For example, early and late stages of conventional conflicts like the war in Ukraine or the United States withdrawal from Afghanistan are characterized by quickly changing conditions, and disorganized or inscrutable armed actors.

[20] SAT still predicts *preferences* of people with less autonomy, but their behavior may be subject to social influence.

[21] Results below show many correct predictions for women, though.

[22] Even expulsion campaigns, though, are not 100% successful. In the conclusion, I discuss how SAT could explain exceptional behavior in these cases.

the article, I focus on the choices of individuals who meet all five conditions, but also briefly examine situations that violate the "decisional freedom" condition to describe interesting family dynamics. In the conclusion, I note settings where SAT might generalize, and speculate about how appraisals interact with structural features this study holds constant—like violence type or ethnic demography.

TESTING SITUATIONAL APPRAISAL THEORY: EVIDENCE FROM INDIA

I test SAT using violence-survivor testimony from interviews and oral histories. Rich, multifaceted testimony from violence survivors is ideal evidence for theoretical and practical reasons. First, SAT aims to explain *why* people choose certain survival strategies. Narrative data, Pearlman (2016) argues, is useful for answering "why" questions while simultaneously "bear[ing] witness" to violence in ways that survey or administrative data do not. Second, survivor testimony about real decisions fulfills SAT's scope conditions better than alternative sources, like behavioral games or survey experiments, which facilitate causal identification but measure decisions about hypothetical or distant threats. Finally, survivor testimony is the most comprehensive data source available for many conflicts. Civilian perceptions of violence do not always appear in administrative data or contemporaneous surveys, and conflicts where civilian attitudes *are* recorded are unusual in other ways (Brenner and Han 2022).

I analyze testimony from Indian Sikhs exposed to political violence in the 1980s and 1990s during the Punjab Crisis (broadly defined), a decade-plus insurgent conflict in North India. This is a good case for testing SAT because the conflict includes a variety of civilian responses to multiple modes of violence, and has ongoing relevance for politics in and out of India. Survival strategies in all four categories appear frequently, providing substantial variation for SAT to explain. The conflict (and testimony) cover different modalities of violence including short, intense urban pogroms and long-running rural insurgency. Testing across violence modalities shows that SAT's scope is not limited to one pogrom. Finally, the Punjab Crisis is an important case, relatively under-examined in political science literature. Thirty years on, the conflict still influences Indian politics, and decades of conflict-related Sikh emigration has created politically important diaspora communities in North America and the United Kingdom (Fair, Ashkenaze, and Batchelder 2020).

In the conflict, many different Sikh separatist insurgent groups in Punjab fought to secede from India and form Khalistan, an independent Sikh homeland (Bakke 2015). The government fought to pacify a state that led India in pre-conflict economic activity, contributed substantially to India's food security, and occupied a critical strategic location along the border with Pakistan. The conflict ultimately caused over 10,000 deaths—mostly Hindu and Sikh civilians (a more detailed description of the conflict is available in the APSR Dataverse; see Milliff 2023b).

Testimony analyzed below covers three conflict "epochs." Some covers June 1984, when the Indian army launched military operations to eject Sikh militants from Amritsar's Golden Temple and arrest militants in rural Punjab. Most respondents discuss pogrom violence that killed over three thousand Sikh civilians in November 1984, shortly after Prime Minister Indira Gandhi was assassinated.[23] Finally, some testimony describes violence perpetrated by Khalistani militants or Punjab police during rural insurgency in the 1980s–1990s. My analysis focuses on individual decision-making, not the complex historical and political narrative of the conflict. I combine testimony from conflict theaters that are considered quite different by Punjab scholars. Differences in violence type and the backgrounds of affected communities are obviously important (SM.A and SM.B), but combining testimony from different "epochs" shows that SAT works well across different circumstances and communities.

The 1984 Living History Project Archive

I use over five hundred video-taped oral histories to test SAT. The video archive, run by a U.S.-based Sikh civil society group, focuses on "1984," a metonym for both June army operations in Punjab and November pogroms centered in Delhi. Testimony was collected around the world (~75% in India, the rest in the United States, Canada, or elsewhere) by "citizen historians," younger members of the Sikh community. Interviews follow a standard format and questionnaire (1984 Living History Project 2019).[24] Oral histories collected in the internet age are of particular value because conflict-related migration spread survivors of the Punjab Crisis across the globe. Histories come from many sites, far exceeding the number of communities a researcher could visit for original interviews. Beyond breadth, oral history archives are useful because they provide an unusually rich record of civilian experiences in 1984, which happened so quickly that relatively little contemporaneous evidence exists. Beyond oral histories and interviews, the best testimony comes from affidavits given years later to government investigatory commissions. Legal affidavits are clearly valuable, but are scoped much more narrowly than oral history interviews.

Oral histories in the archive were solicited via the networks of the group running the archive or contributed organically via instructions on the website. A very small number record the testimony of people who are otherwise notable or high-profile. Because memorializing 1984 is a priority among Sikhs who support autonomy or independence, oral history respondents may favor Sikh autonomy more than the population aver-

[23] Following Van Dyke (2016), I describe the overwhelmingly one-sided violence as a "pogrom."
[24] http://www.1984livinghistory.org/about-this-project/.

TABLE 4. Oral History Summary Statistics

Variable	Complete cases	Counts
Violence proximity	0.93	Secondhand: 254, Witness-at-distance: 89, Firsthand: 84, Family: 48
Gender	0.99	M: 369, F: 134
Survival strategy	0.53	Adapt: 76, Flee: 75, Hide: 70, Defend: 50

Note: Respondents who do not describe a survival strategy are dropped from main analyses. Gender is measured primarily via names. Violence proximity is coded by transcribers, then harmonized with author's coding.

age.[25] In original interviews, where I could ask about politics directly, I found no substantial pattern in interviewees' political attitudes.

Most testimony comes from Sikhs who were directly exposed to Punjab Crisis violence—the most-represented cities in the archive are Delhi and Amritsar—but some histories document more distant experiences of the conflict—that is, in California but with family in India. Using transcripts I commissioned, plus archive metadata, I construct covariates like age, location in 1984, proximity-to-violence, and date of exposure. To code respondent gender, I use the gendered surnames adopted by some Sikhs, then double-checked by hand. Descriptive statistics are in Tables 4, 5, and SM.A.

Analyses below focus on individuals who were directly exposed to violence; a subset of the full archive. Table 4 shows that some oral history respondents do not report choosing a survival strategy. Those who were too distant from violence to choose a strategy (i.e., in California in 1984) drop from analyses of survival strategies. For analyses using hand-labeled situational appraisals I read transcripts of the entire oral history archive and use coding rules to label appraisals in 221 oral histories that transcribers flagged as "high proximity" to violence (see the section on hand-labeling). After discarding a limited number of histories that mentioned no survival strategy, the final dataset used in the analyses in Figure 2 contains 263 survival strategies observed across 182 histories.

The oral histories are public data; interviewees know their testimony is "widely available for viewing."[26] I also sought and received the archive's permission to use videos for academic research. Still, I use pseudonyms when quoting oral histories due to ethical considerations around the use of archives to study political violence (Subotic 2021).

Interview Testimony from California and Delhi

In addition to oral histories, I analyze 30 original interviews. I use interview evidence to inductively identify context-appropriate measures of control and predictability appraisals. Based on the patterns observed in those interviews, I create coding rules to label appraisals in oral histories. Interviews occurred in Delhi and in Sikh diaspora communities in California in 2019 and 2020,[27] and cover the same conflict "epochs" as oral histories. I describe sample selection, and techniques for encouraging people to plainly recount experiences rather than providing post hoc commentary in SM.B. Because interviews included direct questions about situational appraisals, respondents concretely and thoroughly discuss how appraisals connect to specific observable implications, beliefs about violence, and other related concepts. The resulting coding rules are described below and in SM.D. Later, I also analyze interviews directly to illustrate the mechanisms linking appraisals to strategy selection.

USING ORAL HISTORIES TO STUDY BEHAVIOR

Oral histories provide unique advantages for studying political behavior, but despite their promise, they are infrequently analyzed at the archive level in political science.[28] Oral histories are useful for testing many social science theories even though people are imperfect narrators of their own lives (Nisbett and Wilson 1977). In some cases, oral histories may be the only viable data source for social scientists studying historical phenomena through the perspectives and interpretations of non-elite individuals whose experiences are not recorded in news or documentary archives. A mixed-methods workflow to measure key variables can help political scientists use oral histories for hypothesis testing.

Testing Hypotheses with Oral Histories

I use oral histories to test SAT because (1) they capture civilian experiences at a larger scale than interview-based projects and (2) they include people that other historical data typically exclude. Situational appraisals are hard to measure systematically in other large-n sources like event data, administrative records, or news reports. Alternative sources like documentary archives

[25] See SM.A.1 for discussion on selection effects.

[26] http://www.1984livinghistory.org/documents/Consent%20Form_English.pdf.

[27] Delhi interviews ended on March 13, 2020, in anticipation of COVID-19 lockdowns.

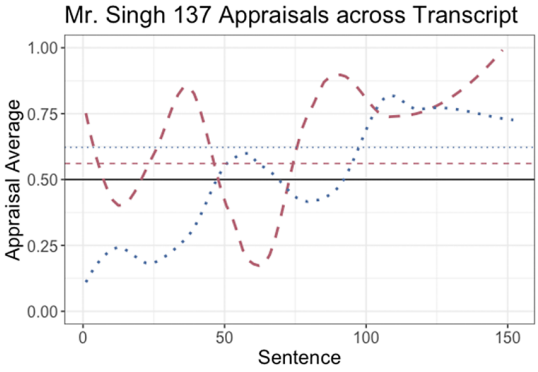
[28] Finkel (2017) uses oral histories, but specifically avoids quantitative analysis and only presents individual-level coding for 51 histories (206). Oral histories are most often used as documentary archives (Hazelton 2017). Some scholars like Pearlman (2017) *create* oral histories rather than test theories using pre-existing collections.

TABLE 5. Additional Oral History Statistics

Variable	Complete cases	Mean	SD
Age	0.69	25.57	13.72
Language = English	1.00	0.35	0.48
Language = Punjabi	1.00	0.62	0.49
Discusses June 1984	1.00	0.80	0.40
Discusses Nov. 1984	1.00	0.88	0.33
Tag: Eyewitness to violence	1.00	0.44	0.50
Tag: Property destruction	1.00	0.44	0.50
Tag: Loss of life	1.00	0.47	0.50
Tag: Gurdwara attacked	1.00	0.43	0.50
Tag: Forced relocation	1.00	0.26	0.44
Tag: Police/Army experiences	1.00	0.56	0.50
Tag: Protected by allies	1.00	0.22	0.41
Tag: Targeted by identity	1.00	0.68	0.47
Tag: Gendered violence	1.00	0.13	0.33
Tag: Police harassment	1.00	0.06	0.23

Note: Age is frequently missing and not used in any analyses. Additional variables come from the archive's video content tags. Some tags are included as covariates to increase precision and to control for differences in violent environment.

FIGURE 1. Moving Average of MuRIL-Generated Appraisal Scores in a Transcript (a) and MuRIL Labeling Summary Statistics (b)



(a)

Var	mean	sd	min	med	max
Ctrl. Score	0.47	0.34	0	0.44	1
Pred. Score	0.47	0.33	0	0.47	1
Male	0.71	0.46	0	1.00	1
Punjabi	0.65	0.48	0	1.00	1
Age	25.6	14.3	0	22.0	69

	Hide	Flee	Adapt	Defend
Action (tx. coded)	60	64	63	44

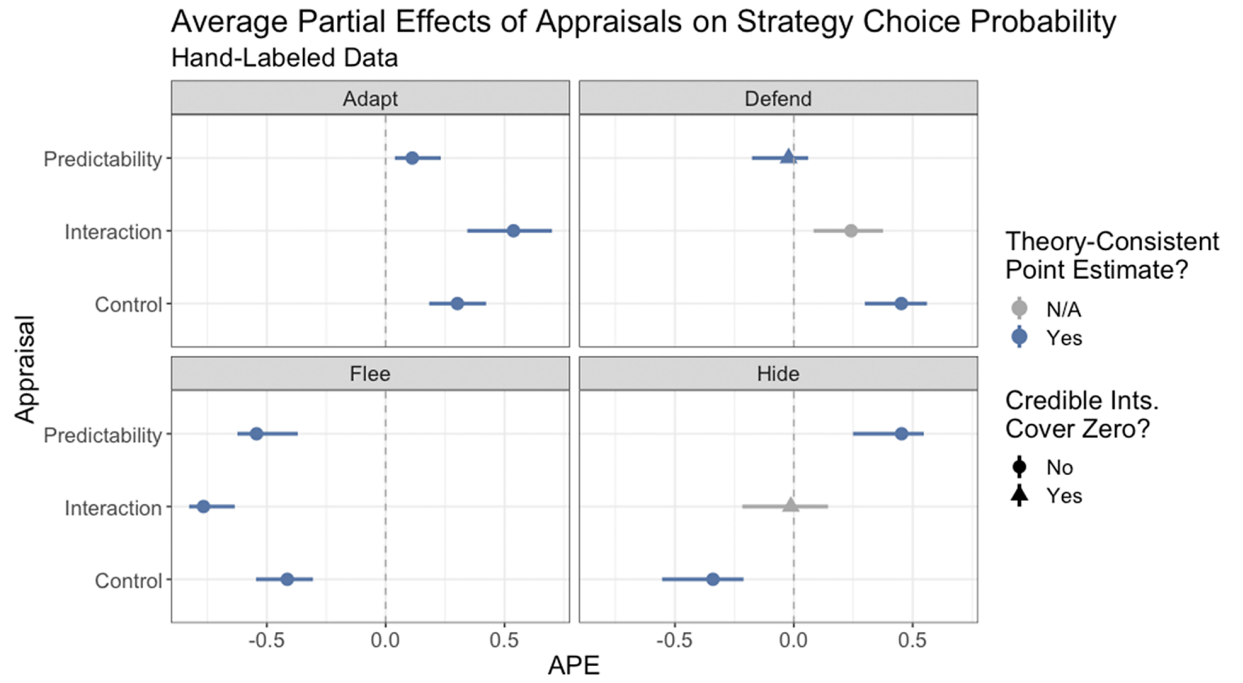
(b)

Note: (a) The dashed red curve shows control, and the dotted blue curve shows predictability. Horizontal lines show respondent means. Mr. Singh 137 averages 0.56 for control, and 0.625 for predictability. In hand-labeled data, his appraisals change: first low control, high predictability, later high control, low predictability. (b) The top table shows the distributions of MuRIL-generated labels and key covariates. The bottom table shows the distribution of strategies. See SM.E.

often cover elites, not ordinary civilians. For many conflicts including the Punjab crisis, oral histories are among the richest sources for studying ordinary people's experiences.

All data sources have limitations. There are three important potential limitations in oral history data, but I argue that each can be straightforwardly addressed—they reflect common challenges in qualitative political science. First, analyses could be threatened by post hoc re-interpretation motivated by politics or simple desire to justify one's behavior. Violent experiences are naturally subject to re-interpretation and post hoc meaning-making (Park 2010). Political entrepreneurs sometimes use this process to promote particular narratives about the causes and consequences of violence or to direct blame attribution. There is evidence of political re-writing in some oral histories I analyze. Two interview guide questions ask about blame attribution, a common subject for post hoc re-appraisal and one that is not central to SAT. I simply drop "blame" responses in my analysis. Thereafter, re-interpretation only threatens inference if it is correlated with particular strategies and appraisal values. This would be more worrying for research focused on variables like political opinions, decision satisfaction, or other quantities more likely subject to post hoc rationalization (Lind et al. 2017). I find no evidence that control and predictability appraisals are politicized in concerning ways. People may also re-appraise to make themselves look or feel better. This would bias results if respondents intuitively

FIGURE 2. Results from Hand-Labeled Data



Note: Change in probability of strategy associated with L to H appraisal shift. Errors are clustered by respondent. Point estimates show APEs for "high" versus "low" control and predictability appraisals, plus the interaction. APEs are estimated from Bayesian multinomial logistic regression with covariates. Error bars show 95% credible intervals. Points in blue support the theory. Raw coefficients are shown in Table SM.17.

understood SAT and adjusted accordingly to justify supposedly "shameful" choices. As described in SM.B, interview respondents do not tend to justify choices or explain satisfaction/dissatisfaction in terms of situational appraisals. "Satisfaction bias" would be more concerning if certain strategies led to systematically more/less satisfaction, and people re-interpreted their experience accordingly.

Second, analysis might be threatened by faulty memory.[29] This threat also affects interviews, surveys, or any other data based on recollection. The solutions, accordingly, are similar. Psychology research suggests, reassuringly, that time is not a particularly important determinant of memory accuracy (Lind et al. 2017); oral histories collected years after an experience should not be dramatically worse than interviews conducted within days or months.[30] The most important memories for this article—emotionally charged memories—should be relatively *easy* to retrieve (Kensinger and Ford 2020; Sharot and Yonelinas 2008).[31] While 1990s clinical literature raised concerns over "repressed" memories, more recent research suggests that "central details" of trauma form especially strong, durable memories (Levine and Edelstein 2009).[32] Life circumstances after violence could also contaminate reported memories. Appraisal reports, though, are *not* significantly correlated with a number of post-treatment variables (SM.L). Data based on recollections always include some drift in memory and interpretation. Literature from other fields (cited above) suggests that memory drift is unlikely to be systematically related to situational appraisals and thus unlikely to bias the test of SAT.

Finally, oral histories might reflect a biased sample of the target population. Survivors who are ashamed of their actions during violence, or those who cannot make sense of what they did, might participate at lower rates. Conversely, survivors whose experience was spectacular or dramatic might participate at higher rates. A bias toward "spectacularness" seems unlikely given how respondents were recruited (SM.H). Nonparticipation due to shame is possible. However, feeling ashamed seems more likely to correlate with whether strategy had adverse consequences, than with

[29] If memory quality correlates with appraisals *and* strategies, this would be a source of omitted variable bias. See SM.D.1 for more discussion.

[30] Certain memory types, like qualitative judgments about previous decisions, degrade over time. These should be orthogonal to situational appraisals.

[31] Kensinger and Ford (2020) note that retrieval can cause memory malleability and socially motivated reinterpretation, mostly when memories are challenged or perturbed in some way. Oral histories focus on active listening rather than conversation, so they should prompt *less* memory change than in-depth interviews, focus groups, or surveys. See more on "demand effects" in SM.D.1.

[32] See SM.A.2 for more detail.

strategy or appraisal values themselves.[33] Non-random samples are a constant, immutable challenge for political violence research, but sampling seems unlikely to bias this specific analysis (SM.H).

Measuring Appraisals in Oral Histories

For studies where key variables are represented concretely in text, oral history analysis is straightforward. Because situational appraisals lack agreed-upon, externally validated scales or measures, they require more complicated proxy measurement. This drawback of oral history data has a familiar remedy: develop strong, theory-informed, *a priori* coding rules (Pepinsky 2007), and show robustness to different measurements. I use two separate appraisal measurement routines to show that oral history evidence supports SAT.

I apply a multi-method workflow combining quantitative full-collection analysis with qualitative study of individual histories. I first construct different situational appraisal measures—in one, a human reader applies coding rules, while another uses automated text classifiers trained to apply coding rules. I show that the relationship between appraisals and strategies is consistent with SAT hypotheses using both measurement strategies. I then present qualitative case studies of 12 histories to illustrate mechanisms and investigate cases that diverge from theoretical expectations. Both measurement routines extract the key independent and dependent variables from the text of the oral histories. I use a number of tools and features of the text to ensure that appraisals are measured consistently and separately from strategies—these assurances are demonstrated in SM.D.1 and SM.E—but because both key variables come from the same text, the analyses ultimately rest on selection-on-observables assumptions common in observational research about violence.[34]

Human Labeling

For the main analysis, I record survival strategies and label appraisals by applying coding rules to 221 high-violence-exposure histories. Pre-specified coding rules distinguish *high*/*low* control and predictability appraisals by codifying metaphors, utterances, descriptions, and particular actions that participants in original interviews associated with appraisals of control or predictability (SM.D).[35] Hand-labeling of appraisals and strategies covers 221 oral histories that describe *close-proximity* violence exposure (coding procedures reported above).[36] Human labeling also allows for recording changes in strategy over time. I record an average 1.44 strategies per history.

I use human-labeled data for main analyses because they best fit the scope conditions and provide the most appropriate, sensitive measures of strategies and appraisals. Human coders, for instance, can easily distinguish a person describing their own experiences from something they witnessed or a story they heard. Because reasonable readers could question whether coding rules were applied consistently, despite assurances in SM.D and SM.A, I use a second quantitative measurement strategy to corroborate the findings.

Text-Classifier Labeling

For the second measurement, I use the same coding rules to create training data for multiple text classifiers. I label ∼2,000 randomly selected sentences out of ∼ 29,000 total to fine-tune three classifiers—Appraisal/Other, Control, and Predictability—on top of a large, pre-trained sequence embedding model, Multilingual Representations for Indian Languages (MuRIL; Khanuja et al. 2021), which can process both English and Punjabi text. I describe model training/tuning in SM.E.

Classifiers have benefits and drawbacks compared to hand-labeling. I use both together because many of their key weaknesses are non-overlapping. One benefit is that, unlike humans, classifiers cannot inadvertently see the appraisals they "expect" given the theory. Further, classifiers cannot subconsciously up-weight sections of text that support the theory. These benefits weigh against two drawbacks. First, classifiers miss information communicated through pragmatics, and struggle with appraisals changing over time (Figure 1b). Second, while the classifiers I train perform very well against standard benchmarks, they are not 100% accurate—classifier-labeled data are noisier than the hand-labeled data. Per Fong and Tyler (2021), this may shrink estimated effects, even after satisfying classical measurement error assumptions.

Models

I use similar-as-possible model specifications for hand-labeled and MuRIL data. For hand-labeled data, models are estimated at the strategy level (individuals can change strategies, errors clustered by respondent). For MuRIL data, models are estimated at the respondent level. All models are multinomial logistic regressions, modeling choice among k strategies as shown in Equation 1:

$$f(k,i) = \beta_{0,k} + \beta_{1,k}\text{control}_i + \beta_{2,k}\text{predictability}_i + \beta_{3,k}\text{control}_i \times \text{predictability}_i + \boldsymbol{\gamma}_k \mathbf{x_i}, \quad (1)$$

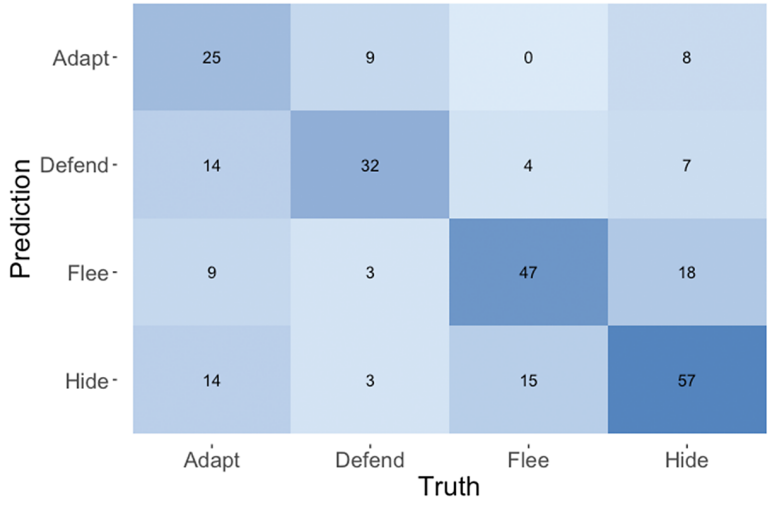
[33] One potentially shameful strategy would be haircutting as a disguise. This may be under-reported, though it does appear. Because haircutting is only one possible "hiding" strategy, people might simply report others in the same category.

[34] I also test for a number of alternative explanations *beyond* mechanical correlation in text measurement. Results of those tests are in the main results specifications, SM.G, and SM.L.

[35] Among other guardrails, coding rules use grammatical structure to avoid "contamination" between independent and dependent variables. See SM.D.1.

[36] I score some histories repeatedly to ensure my scores do not "drift" over time. Replication data include contemporaneous justifications for each label.

FIGURE 3. Confusion Matrix for Predicted Strategies in Hand-Labeled Data



Note: On-diagonal cells count correctly predicted strategies. Off-diagonal cells count incorrectly predicted strategies. Sixty percent of strategies are correctly predicted—nearly twice the success rate of random guessing (Table SM.19).

where $\beta_{1,k}$, $\beta_{2,k}$, $\beta_{3,k}$ are coefficients for control, predictability, and control×predictability for the kth strategy. γ_k is a coefficient vector for covariates $\mathbf{x}$ for the kth strategy. All models include covariates for interview language,[37] gender, date of violence (November pogroms, June operations in Punjab, other), proximity to violence, and additional indicators of violence type from archive metadata. The hand-labeling model includes a covariate for whether the respondent or their immediate, nuclear family is carrying out the strategy.

Appraisals in hand-labeled data take binary high/low values. In MuRIL data, I take a respondent-level average over the high/low scores of each sentence, so appraisal values $\in [0,1]$. I present all results in terms of average partial effects (APEs) of changing appraisals on the probability of choosing strategy k. The APE is the effect associated with moving from *low* to *high* for binary variables, or from 25th to 75th percentile for numeric variables. SM.F shows un-transformed coefficients.[38]

RESULTS

Across different appraisal measurements, oral history evidence strongly supports hypotheses in Table 3. Higher control appraisals are associated with preference for "approach" strategies, higher predictability appraisals correspond with "moderate" strategies, and the interaction term functions as expected: encouraging adaptation, discouraging flight.

Results from Hand-Labeled Appraisals

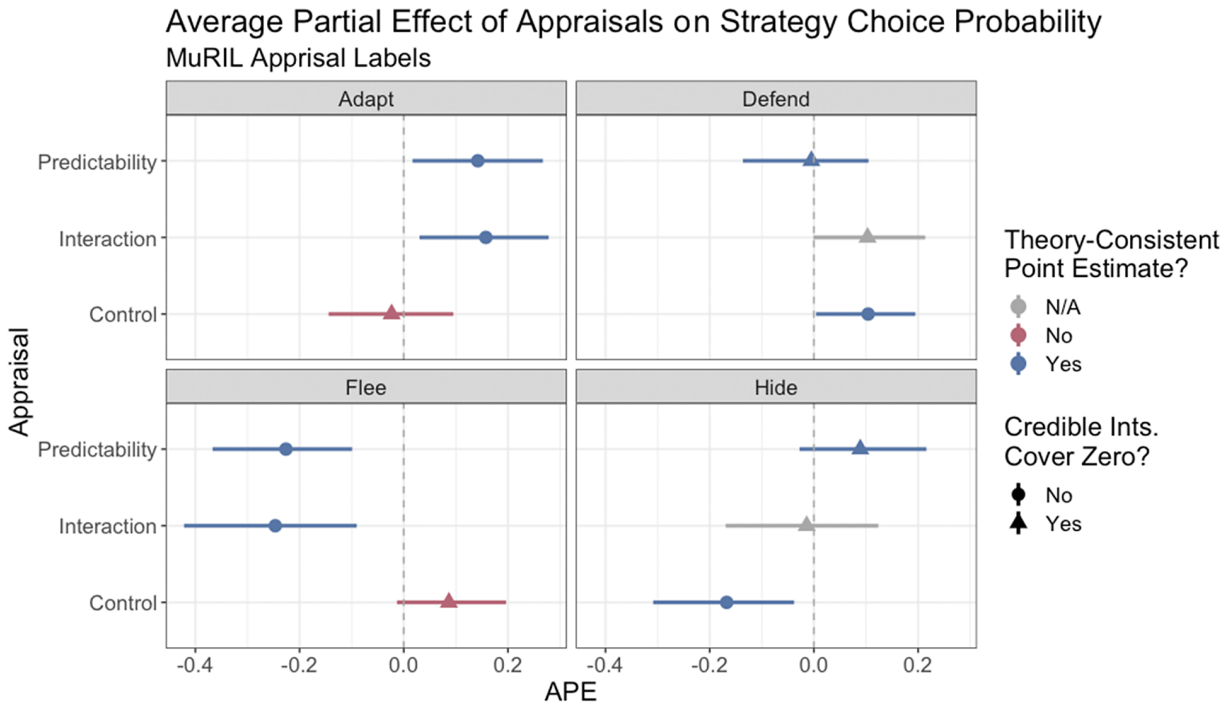
Results from hand-labeled data support the three hypotheses. First, Figure 2 shows theory-consistent results for control (Hypothesis 1) and predictability (Hypothesis 2) appraisals. Higher control appraisals are associated with choosing approach strategies (adaptation, defense). Higher predictability appraisals are associated with choosing moderate strategies (adaptation, hiding). The results also support Hypothesis 3: adaptation is attractive with high control and predictability appraisals, and flight is attractive with low control and predictability appraisals. In total, 9 of 10 predicted associations (Table 3) are supported, after controlling for alternative explanations like gender identity, resource access, or micro-level variation in violence intensity (see SM.F). One association is not—a negative relationship between predictability and "fighting"—but results are not consistent with large effects in the opposite direction either. Perhaps "fighting," compared to other strategies, is driven by control appraisals more than predictability.

Results can also be expressed as a confusion matrix, comparing theory-predicted strategies (rows) to actual strategies (columns). Confusion matrices are diagonal matrices *iff* a theory accurately predicts every observed outcome. Parsimonious social science theories never achieve perfect accuracy, but the matrix shows how much variation a theory explains compared to random guessing, and identifies the common mis-predictions.

[37] This is an available, imperfect proxy for wealth. SM.G shows consistent results with a better proxy available for a subset of respondents.

[38] I use Bayesian estimation because it produces more intuitive uncertainty interpretations. Bayesian credible intervals are also typically conservative, and can be asymmetric around the posterior's central tendency, both useful properties for interpreting results beyond "significantly different from zero."

FIGURE 4. Results from MuRIL Data



Note: Point estimates show APEs for 25%–75% shifts in control and predictability appraisals, plus an interaction term. This model uses transcriber-coded strategies as a response variable, with the same Bayesian estimation and similar controls compared to the hand-labeled data model. Points in blue are consistent with SAT. Red points are not consistent with SAT. Raw coefficients are shown in Table SM.18.

Figure 3 shows a confusion matrix for hand-labeled data. Situational appraisals correctly predict strategy selection nearly twice as well as random guessing (SM. F). Robustness checks in SM.G confirm results using a better wealth proxy, available for a subset of respondents.[39]

Results from Text Classification

MuRIL text classifier data generally support the same conclusions as above, despite additional noise/error inherent to the text classification process. Figure 4 shows results. In these data, survival strategy is recorded by transcribers who produced original-language transcripts from oral history videos. They recorded which *single* strategy (if any) the oral history respondent pursued. This differs from the hand-labeling data, which allows for respondents changing strategies over time. Transcribers were not aware of the research question or hypotheses.

Results show moderate support for Hypothesis 1: higher control appraisals are associated with more "fighting" strategies and fewer "hiding" strategies as predicted, but not significantly associated with fleeing or adapting, and credible intervals are inconsistent with substantial effects in the hypothesized direction. Support for Hypothesis 2 is strong: higher predictability significantly increases likelihood of "adaptation," and significantly decreases likelihood of "fleeing." The credible interval for the high predictability–"hiding" association is consistent with up to a 20 percentage-point effect in the hypothesized direction and inconsistent with any sizable effect in the opposite direction. The "fighting"–low predictability association is weak, as above. Results conclusively support Hypothesis 3: a 25th to 75th percentile change in the interaction term supports over a 10% increase in adaptation, and almost a 20% decrease in fleeing.

Overall, MuRIL data provide statistically significant support for the majority of predicted associations (Table 3), and shows correctly signed coefficients for 80% of predicted associations.[40]

[39] Wealth is slightly negatively correlated with predictability, and uncorrelated with control.

[40] Again, literature suggests that results from sentence-level text classification may be attenuated compared to equally valid hand-labeling approaches. The results may be further attenuated by averaging sentence-level appraisal scores across a document. This diminishes IV variation, making MuRIL scores less "extreme" than binary hand-label scores (Figure 1). Transcripts will likely include *both* high and low scoring sentences, even when the overall appraisal is clear. Even if the MuRIL results are the correct ones to interpret

Interpreting Quantitative Results

A clear picture emerges from quantitative results: analyses with both appraisal measures are consistent with SAT; the theory explains a substantial proportion of previously unexplained variation in survival strategies. These associations are not meaningfully attrited by accounting for covariates/alternative explanations like identity, violence intensity, or violence type. Material resources, the leading alternative explanation that lacks good dataset-wide proxies, are tested in SM.G with the subset of oral histories where better proxies exist. Those analyses show that wealth is un-correlated with appraisals and with ultimate strategy selection. SAT, in other words, explains a substantial amount of variation that demographic and structural factors do not.

Qualitative Case Studies

Situational appraisals explain the survival strategies that people pursue during violence. To further investigate *how* this happens, I qualitatively analyze "on the line" and "off the line" oral histories for each strategy (Lieberman 2005). I select 12 cases non-randomly to analyze rich interviews that offer more insight into decision processes. Full narratives for each are in SM. I. Case analyses show three patterns. First, situational appraisals inform strategy selection, consistent with SAT. Second, appraisals work by providing inputs for conscious decision-making.[41] Third, many "missed predictions" are caused by small-community or family influences on decisions.

Situational Appraisal Theory at Work

Case studies show that appraisals provide important decision-making inputs. In case 496, two sisters confront pogrom violence in Western Uttar Pradesh. Changing predictability appraisals lead them to change strategies. The sisters describe feeling intense vulnerability and little control—their father was away caring for an ailing relative, and their home was physically exposed and marked with a khanda (Sikh symbol). They tried to barricade the house, but quickly questioned whether the barricade would keep out the approaching mob: "it seemed like [the furniture] wasn't going to stay there for too long." This re-assessment of predictability—*future* viability of staying put—informed their decision to flee, climbing away from the house, roof to roof. Appraisals are also important in other correct predictions. In case 333, Mr. Singh emphasizes low predictability (receiving disjointed information about violence) and high control in explaining why he fought back when mobs entered his train compartment. His sense of control was boosted by his compartment-mate, a Sikh paramilitary police soldier. When the mob arrived, he prepared to fight, but the soldier pled with the mob, and left Mr. Singh to fight alone. The mob beat Mr. Singh unconscious. Feeling control was critical to his decision to fight, but it also illustrates an important point about SAT: appraisals do not necessarily point toward the *best* strategy. More correctly predicted cases are in SM.I.

Deviations from the Theory

Cases that deviate from SAT fall into two groups. First, some describe circumstances that violate scope conditions: respondents' strategies are dictated by someone with higher social status, or respondents do not actually think they are threatened by violence (case 337 in the SM). In case 12, for example, Mr. Singh's appraisals support a "hiding" strategy and he hides initially, but then chooses to flee following guidance from a neighbor (a government official) who initially helped him hide. Mr. Singh down-weights his own appraisals, deferring to someone with higher status or perceived inside information. It is unclear whether Mr. Singh flees *despite* his appraisals, or because the neighbor has *changed* his appraisals.

Other cases are clearer misses in measurement or theory. In case 125, models measure low control and predictability, predicting fleeing. Mr. Singh 125 hides at home. His situational appraisals are expressed ambiguously: On the one hand, he describes feeling low control, and uncertainty that only abates when the Army arrives on November 3. On the other, he describes having weapons at home that he is willing to use, and describes proactive steps his Hindu neighbors take to mis-direct nearby mobs. Neighborly aid might account for Mr. Singh's short-term strategy, but text evidence does not clearly show appraisals to match.

INTERVIEW EVIDENCE

Oral history evidence shows strong support for SAT but uses somewhat indirect appraisal measures. Original interviews measure appraisals more directly and further demonstrate the importance of control and predictability. Some interviews, though, portray situations outside SAT's scope conditions in which respondents' appraisals matter little. Some interviewees describe strategies being chosen per the situational appraisals of parents or other family members. Others describe a force majeure that closes off a pathway SAT predicts they would prefer. Table 6 lists interviews quoted in this section (plus oral history cases in SM.I) by survival strategy.

Interpreting Interview Evidence

Interviews show that situational appraisals provide information for making difficult decisions. High predictability appraisals help people understand how to work within their environment to stay safe. One respondent quoted below, for instance, thought she

(unconscious bias in hand-labeling could occur), MuRIL results strongly support most SAT hypotheses.

[41] The perfect evidence would be a statement where appraisal and action are logically connected with a phrase like "so" or "therefore" in English, and "toh" or "is laii/is kar ke" in Punjabi.

TABLE 6. Interview Quotations and Oral History Case Studies Arranged by Strategy

Strategy	Respondent
Adapt	Mr. Singh E (Main Text), Mr. Singh 26 (SM.I)
Defend	Mr. Singh 333 (SM.I), Mr. Singh 59 (SM.I), Mr. Singh 337 (SM.I), Mr. Singh 296 (SM.I)
Flee	Mr. Singh A (Main Text), Mr. Singh C (Main Text), Ms. Kaur 496 (SM.I), Mr. Singh 140 (SM.I), Mr. Singh 193 (SM.I), Mr. Singh 12 (SM.I), Mr. Singh 158 (SM.I)
Hide	Ms. Kaur B (Main Text), Mr. Singh 385 (SM.I), Mr. Singh 125 (SM.I)

understood why mobs targeted certain houses (Ms. Kaur). She used this knowledge to tailor the "hiding" strategy she adopted. People with low predictability appraisals can't settle on behavioral modifications to stay safe in their environment, so they consider more drastic, disruptive alternatives (Mr. Singh A).

Control appraisals function similarly. People who evince low control appraisals when considering threats from mob violence, militant groups, or the police prioritize avoidance: they are pessimistic about the outcomes of interacting with threats, so they try to stay away. Depending on their appraisal of predictability, this either leads to hiding—planning life around predictable threats—or trying to escape their reach by fleeing.

Appraisals and Strategy Selection in Interviews

Original interviews shows three patterns that illustrate SAT at work. First, interviewees who chose to flee emphasized helplessness and unpredictability to explain their decisions. One interviewee described a situation with police and militants that prompted him to leave Punjab as a young man. Mr. Singh's low control appraisal centered around a situation where militants would "show up at your home in the middle of the night" demanding food or shelter. He noted "the men are carrying guns; you can't say no." After the militants left, police arrived to punish the people who had been coerced into aiding militants. Police "harassed and arrested a lot of people…who were in our situation."[42]

Second, interviewees who chose "adaptation" strategies often described violence as rule-bound, and believed they could take actions to diminish risk. Comparing two stories from the 1984 pogroms in Delhi, high predictability but different appraisals of control explain choices to hide versus adapt.

Ms. Kaur's family hid at home in North Delhi for days. From the outset, her control appraisal was very low, in part because her father was stranded away from the house. Meanwhile Ms. Kaur, hiding on the roof, saw a neighbor's home set on fire. She recalls the neighbor emerging from his house brandishing his kirpan. This made the mob disperse, but only briefly. Seeing the futility of her neighbor's action made her feel powerless. She remembers her mother preparing to kill her and her siblings if the mob broke in: "We were scared… my mom… she had made small packets of [cyanide] in her hands." She said, "if anyone tries to touch my daughters, then I will put this in my daughter's mouth."[43]

Ms. Kaur's appraisal of predictability was higher, per coding rules in SM.D. Two things boosted predictability appraisals. First, her family trusted their Hindu neighbors ("We knew … they [would] be good to us"), unlike others who recall recognizing neighbors in the mobs.[44] Second, she describes detailed knowledge about targeting. She understood how mobs identified occupied Sikh homes—people in trees called to mobs below "which house of a Sardar is lit with lamps"—and that empty houses were left alone. These features made hiding seem attractive, so her family responded by making their house look empty.[45]

Across the city, Mr. Singh pursued adaptation, venturing out in Southwest Delhi despite options to flee or hide. His uncle who had emigrated to Europe arranged an evacuation, but Mr. Singh's father declined.[46] Having weapons bolstered his control appraisal. An armed Sikh neighbor protected the house on the 31st. Later, Mr. Singh's father carried a gun when they left the house on November 1. His predictability appraisal, like Ms. Kaur's, was based on his understanding of how violence was targeted.

Third, some interviewees' strategies were dictated by higher-status people like parents. One man who fled Punjab illustrates this. When asked about his appraisals, he said his mother's control appraisal mattered more than his own. He recalls a pivotal bus ride that shaped her control appraisal. Police stopped the bus and pulled young men off. His mother begged the police to let her son go. He was surprised they did. As they rode onward, his mother explained that she felt she lacked control to mitigate threats that young Sikh men faced. Therefore, she thought her son needed to leave: "We've got to get out of here. Your dad's dead,[47] if we continue here … they're going to shoot you." His

[42] Mr. Singh A, interviewed in California, September 2019.

[43] Interviews and oral histories contain little information about sexual violence, as do court affidavits and government investigations. Previous research documents instances of sexual violence during the pogroms (Kaur 2006), but suggests it was *less* common than in many political violence episodes (Van Dyke 2016, 207–8). Understanding how SAT applies to sexual violence requires additional research.

[44] Mr. Singh D, interviewed in California, October 2019.

[45] Ms. Kaur B, interviewed in Delhi, March 2020.

[46] Mr. Singh E, interviewed in Delhi, March 2020.

[47] Unrelated to the conflict.

mother's feeling of powerlessness was pivotal: "It was sealed that day that somehow I've got to get out."[48]

CONCLUSION

This article applies a new political psychology approach to an enduring question in the study of conflict: how do civilians facing sudden, rapidly evolving political violence make judgments about danger and choose strategies to secure their own survival? I argue that people's behavior during violence depends on how they interpret their environment—their level of control and the extent of predictability in the threat environment—and that interpretations often vary within conflicts, communities, or even within individuals over time. I show that situational appraisals—the interpretations—are a useful tool for explaining people's choices.

SAT helps explain how civilians respond to sudden onset, surprising violence perpetrated by relatively disorganized actors—a type of violence that is increasingly common around the world (Raleigh et al. 2010). SAT might adapt well to other types of violence too. Future work to establish the generalizability of SAT could focus on conflicts with different levels of armed group organization, different violence technologies, and longer time horizons, as well as societies with different cultural values around collective decision-making and altruism. Individual interpretation cannot realistically dominate in all circumstances—strategic bombing and mass expulsion campaigns are particularly difficult ground—but SAT may still explain behavior in insurgencies or conventional wars.

Violence of all types is characterized by "fog" and divergent interpretations (Brass 1994; von Clausewitz 1976), but some constellations of identity, resources, and cultural values around honor and altruism, may lead to more homogeneous appraisals and behaviors. Accounting for heterogeneity/homogeneity across violent contexts may help address other puzzles, like divergent findings in literature about "consequences" or "legacies" of violence. Control and predictability appraisals are part of the meaning-making and interpretation repertoire that helps people cope and recover after violence. Accounting for population-level appraisals could explain why some studies find cohesion and resilience after war (Bauer et al. 2016; Hartman and Morse 2020), while others find enduring harms (Vinck et al. 2007).[49]

There is also more to learn about how appraisals form, especially about how structural characteristics interact to make situational appraisals more or less homogeneous. This article has shown that situational appraisals explain variation that is not captured by factors like identity and socioeconomic status. At the same time, these factors are correlated with appraisals to varying degrees. Future work should investigate how appraisals are shaped by identity and resources. Situational appraisals might, for example, be a useful *mechanism* for explaining the link between identity factors like gender and behavioral tendencies like lower aggression (McDermott 2015). Further, if certain demography–appraisal links generalize across contexts, those findings would make SAT more powerful for prediction and real-time analysis of behavior during violence.

SAT has three implications for research and policy-making related to civilians facing conflict. First, SAT introduces a set of mechanisms that intercede between the environment people face and the preferences they form. Previous studies acknowledge that structure does not provide deterministic explanations for civilian behavior, but SAT identifies new, testable hypotheses to explain behavioral variation within structurally similar groups. Focusing on situational appraisals helps explain within-group variation and, because appraisals can change faster than structural variables, it also provides new leverage to explain shifts in a person's behavior over time.

Second, SAT identifies directions for future research on the micro-foundations of political crises including conflict-related displacement, ethnic cleansing, and vigilantism. Existing literature focuses on the consequences of violence intensity and community structure; I provide a framework connecting environmental conditions to individual decision-making.

Third, in terms of policy implications, this article shows that extremely disruptive action depends on low predictability appraisals, which are not often universally shared. This suggests that focusing on the material "root causes" of insecurity might be insufficient to promote stability. Attending directly to key actors' sense of predictability could make efforts to increase resilience and discourage escalation more effective.

Finally, rich testimony in oral histories raises new questions about violence that are worth future investigation. One theme is the importance of aid, especially across communal lines, in shaping civilian's choices. Political scientists know "rescue" occurs during anti-minority violence (Braun 2016), but mostly focus on the supply-side. We know less about demand: how do good samaritans affect the behavior of potential victims? Another pattern is the effect of social cohesion on control appraisals. This article does not investigate the causes, in some Delhi neighborhoods, of successful community defense during pogroms. Survivor testimony suggests intra-Sikh coordination (unlike aid from Hindus) had feedback effects on control appraisals. Future work to understand how appraisals spread might explain these important dynamics. Ultimately, many interesting phenomena reported in oral histories call for a different level of analysis: social units and communities. This article demonstrates that individual perceptions are important determinants of behavior, but there is much more to learn about how the social world reflects back on individuals enduring conflict. Decision-making during violence is, thankfully, not a solitary exercise.

[48] Mr. Singh C, interviewed in California, September 2019.
[49] See Figure SM.16.

SUPPLEMENTARY MATERIAL

To view supplementary material for this article, please visit https://doi.org/10.1017/S0003055423001259.

DATA AVAILABILITY STATEMENT

Research documentation and data that support the findings of this study are openly available at the American Political Science Review Dataverse: https://doi.org/10.7910/DVN/GM1VRQ. Limitations on data availability are discussed in the text and the Supplementary Material.

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CONFLICT OF INTEREST

The author declares no ethical issues or conflicts of interest in this research.

ETHICAL STANDARDS

The author declares the human subjects research in this article was reviewed and approved by the MIT Committee on the Use of Humans as Experimental Subjects under protocols #E-1342 and #E-1623 and amendment #E-1994. The author affirms that this article adheres to the APSA's Principles and Guidance on Human Subject Research.

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