

# Cognitive Bias of Hate Crime Perpetrators: How Elaboration Theory Contributes to Intergroup Violence

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## ABSTRACT

Hate crimes, as violent acts targeting group identities, have increasingly drawn the attention of social psychology and criminology due to the cognitive mechanisms underlying them. This paper adopts the elaboration likelihood model as an analytical framework to explore the role of cognitive biases in the formation of hate crimes, aiming to reveal the complex interactive relationships among information processing pathways, emotional factors, and group identity. The study first reviews the basic characteristics of hate crimes and the theoretical development of cognitive biases, then analyses their influence on criminal motives from the perspectives of stereotypes, attribution biases, and in-group and out-group identity. Building on this theoretical framework, the study further explores how the marginal route and emotional processing biases in the Elaboration Likelihood Model solidify prejudices, weaken reflection, and thereby trigger or amplify violent behaviour. This paper argues that cognitive biases do not exist in isolation but are shaped by information processing pathways and emotional responses, which together form the perpetrator's group hostility and tendency to justify their actions, providing psychological support for the occurrence of hate crimes. The research conclusions contribute to a deeper understanding of the cognitive causes of hate crimes and provide a theoretical basis for anti-hate education, media intervention, and social governance.

## KEYWORDS

Hate Crimes; Cognitive Biases; Elaboration Likelihood Model; Group Identity; Information Processing.

## 1. INTRODUCTION

Hate crimes, as a form of extreme behaviour with strong social destructive power, have shown an upward trend globally in recent years, attracting widespread social attention and academic research. Such crimes not only manifest as individual hostility and violent behaviour toward specific groups but also reflect systemic biases in information processing, specifically cognitive biases leading to irrational hostility toward others. In exploring the causes of hate crimes, traditional sociological and psychological theories have primarily emphasised factors such as structural social inequality, intergroup competition, and individual psychological imbalance, while paying relatively less attention to the internal mechanisms of cognitive processes<sup>[1]</sup>. This paper introduces the Elaboration Theory to examine how individuals selectively process and integrate information, aiming to reveal the psychological mechanisms and cognitive pathways underlying hate crime behaviour. Through theoretical integration and empirical analysis, this paper aims to clarify how cognitive biases influence individuals' attitudes and behaviours toward specific groups through dimensions such as processing depth, emotional intensification, and social labelling. This seeks to provide new theoretical perspectives and intervention strategies for understanding and preventing hate crimes, advancing related research from descriptive analysis to mechanistic explanation, and offering psychological foundations for social policy formulation<sup>[2]</sup>.

## **2. THEORETICAL FOUNDATION**

### **2.1. Concept and Characteristics of Hate Crimes**

Hate crimes, also known as bias crimes, refer to hostile illegal acts committed against victims based on specific characteristics of the group to which they belong (such as race, religion, sexual orientation, gender, nationality, etc.). Compared to general criminal offences, the fundamental characteristic of hate crimes lies in the fact that their underlying motivation is based on prejudice and discrimination against a group, rather than specific resentment toward an individual. Such crimes not only cause direct harm to the victim but also instil widespread fear within the victimised group, thereby exacerbating social division and group conflict<sup>[3]</sup>. Hate crimes often exhibit high levels of symbolism, violence, and contagion. Perpetrators use violent acts to express their rejection of a particular group and reinforce their ideological stance by selecting target individuals to ‘represent’ the entire group. Therefore, understanding the mechanisms underlying hate crimes requires going beyond legal definitions to explore the underlying psychological structures and social psychological processes, particularly the role of cognitive biases in the construction of intergroup hostility<sup>[4]</sup>.

### **2.2. Basic Theory of Cognitive Biases**

Cognitive biases refer to systematic errors in information processing caused by inherent psychological mechanisms or external influences. These biases can distort individuals' perceptions, judgments, and decisions about the external world, leading to irrational or inaccurate outcomes. Common cognitive biases include confirmation bias (the tendency to seek information that supports one's own views), group attribution bias (overgeneralising the behavioural characteristics of a group), and in-group preference and out-group devaluation. These biases are not occasional errors but rather an ‘energy-saving’ mechanism of the cognitive system under resource-constrained conditions, enabling individuals to make rapid judgements in complex environments. However, this mechanism may have negative effects in the field of social cognition, particularly in group interactions and evaluations, where it can lead to the solidification of stereotypes, group labelling, and hostile attitudes toward heterogeneous groups. Cognitive biases not only influence individuals' construction of social reality but also provide an important explanatory foundation for the psychological motivations behind extreme behaviours such as hate crimes<sup>[5]</sup>.

### **2.3. Research on the Association Between Cognitive Biases and Hate Crimes**

Existing research indicates that cognitive biases play a key role in the formation of hate crimes. Individuals gradually internalise negative cognitive patterns toward ‘outgroups’ during socialisation and activate these biases under specific social environments or emotional states, thereby influencing their judgements and behaviours. For example, under social pressure, unemployment, or crisis situations, individuals are more likely to resort to simplified cognitive pathways, attributing complex social issues to a specific group, thereby creating a scapegoat effect. Additionally, confirmation bias and attribution bias lead perpetrators to overestimate the threat posed by the ‘target group’ while ignoring the irrationality and harmfulness of their own actions. Some empirical studies have also found that before hate crimes occur, perpetrators often exhibit highly selective information intake and extreme group identity tendencies, which align closely with the mechanisms of cognitive biases. Therefore, incorporating cognitive bias theory into hate crime research not only helps explain individual behaviour from a psychological perspective but also provides scientific basis for prevention and intervention<sup>[6]</sup>.

### **3. THEORETICAL FRAMEWORK**

#### **3.1. Definition and Classification of Cognitive Biases**

Cognitive biases refer to systematic errors that occur during an individual's perception, memory, reasoning, and judgment processes. These biases are often caused by the brain's simplification strategies when processing complex information. Tversky and Kahneman, among other scholars, noted in their heuristics and biases theory that humans often rely on rules of thumb for quick judgments rather than comprehensive analysis of facts, leading to cognitive errors. Cognitive biases come in many forms, primarily categorised into attribution biases (e.g., fundamental attribution error, self-serving bias), information processing biases (e.g., selective attention, confirmation bias), and group cognitive biases (e.g., in-group preference, out-group homogeneity effect). In social conflict and group confrontation scenarios, individuals are more prone to these biases, exaggerating negative perceptions of heterogeneous groups, ignoring their individual differences, and ultimately forming stereotypes and hostile attitudes. Therefore, identifying different types of cognitive biases is crucial for revealing the psychological foundations underlying hate crimes.

#### **3.2. Core Concepts of the Elaboration Likelihood Theory**

The Elaboration Likelihood Theory (ELM) was proposed by Petty and Cacioppo to explain the cognitive processing mechanisms involved in persuasion and information reception. The theory posits that information processing follows two pathways: the central route and the peripheral route. The central route involves individuals conducting in-depth, logically rigorous analysis of information, with a high degree of processing, suitable for situations where the audience has high motivation and cognitive resources; the peripheral route, however, relies on emotional, authoritative, or stereotypical cues for rapid judgment, with a low degree of processing, suitable for situations with low motivation or limited cognitive capacity. ELM emphasises that the choice of processing route not only influences the degree of information acceptance but also affects the stability of individual attitudes and behavioural tendencies. In the context of hate crimes, peripheral processing makes individuals more susceptible to emotional manipulation and group biases, thereby reinforcing negative attitudes toward 'enemy groups' and triggering hostile behaviour.

#### **3.3. Application of the Elaboration Likelihood Model in Hate Crimes**

Applying the Elaboration Likelihood Model to hate crime research can help reveal how individuals process information related to 'heterogeneous groups' in specific social environments. In situations of social unrest, political polarisation, or media incitement, individuals are more likely to adopt peripheral processing, relying on existing biases, emotional rhetoric, or extreme group narratives for quick judgements. In this process, cognitive biases and low processing depth interact, leading to information asymmetry and polarisation tendencies. For example, individuals are more likely to accept simple, emotional narratives such as 'they threaten our safety,' while ignoring complex, diverse social facts, thereby exacerbating hostility toward the target group. Additionally, peripheral route processing enhances the transmissibility of extreme attitudes, enabling hate speech to spread rapidly within social networks or groups. Therefore, the elaboration-location theory not only reveals the deep-seated influence of information dissemination on individual cognitive attitudes but also provides a robust theoretical foundation for understanding the cognitive triggers and dissemination mechanisms of hate crimes.

## 4. ANALYSIS OF THE RELATIONSHIP BETWEEN COGNITIVE BIASES AND HATE CRIMES

### 4.1. The Role of Prejudice and Stereotypes

Prejudice and stereotypes are one of the core psychological foundations of hate crimes. They construct a framework of hostility toward the target group through rigid cognitive patterns of the perpetrator. Stereotypes involve the excessive simplification and generalisation of the characteristics of members of a particular group, while prejudice adds negative evaluations to these stereotypes, leading to stable emotional attitudes. During socialisation, individuals are constantly exposed to and reinforce pre-existing views about certain social groups through education, media, and group discourse, thereby unconsciously establishing a binary opposition between ‘them’ and ‘us.’ Under the influence of cognitive biases, individuals often overlook the internal differences within the target group and label negative behaviours as ‘group characteristics.’ When such biases are repeatedly activated and resonate with one's own group identity, real-life frustrations, or fear, they may evolve into the psychological motives for hostile behaviour. In hate crimes, perpetrators often commit violence against victims solely based on their group identity, even without direct conflict with the victims. This behaviour stems from unconscious endorsement of stereotypes and selective reinforcement of biased information. Thus, biases and stereotypes not only cause cognitive distortions but also reinforce the perceived legitimacy of hate crimes at the motivational level.

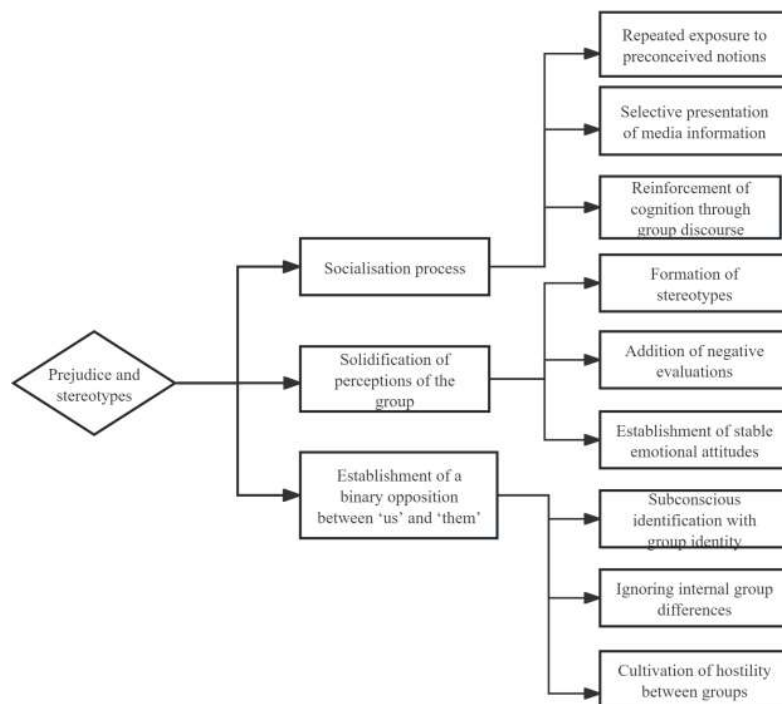
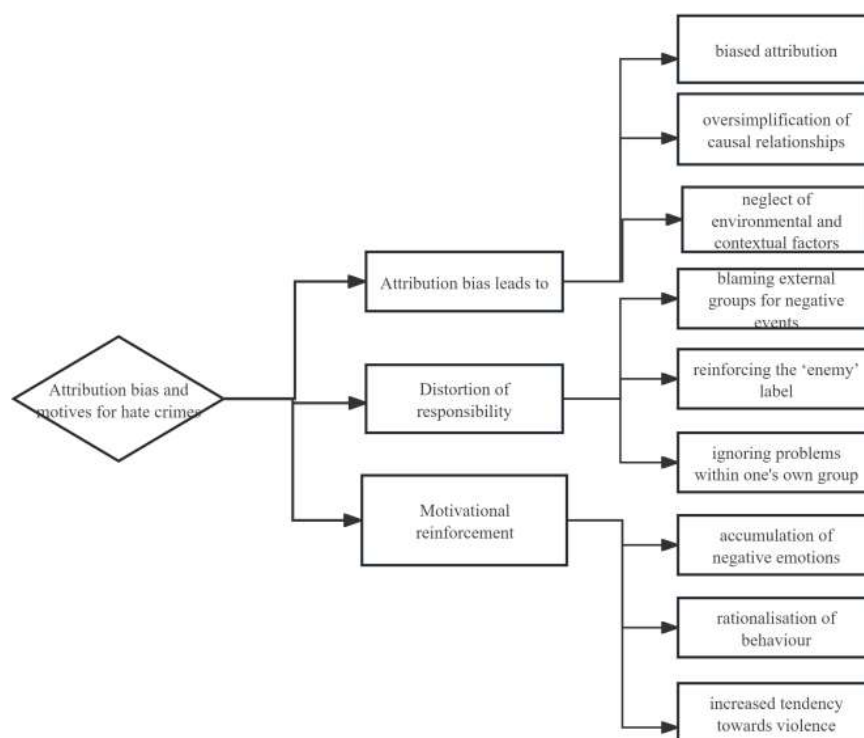


Figure 1. Flowchart of the effects of prejudice and stereotypes

### 4.2. Attribution Bias and the Motivation for Hate Crimes

Attribution bias is one of the key psychological mechanisms underlying hate crimes, manifesting as individuals' tendency to attribute causes to others' stable, intrinsic traits when explaining social phenomena or others' behaviour, while ignoring contextual factors. In the context of intergroup conflict, this bias easily leads to negative characterisation and labelling of target groups. For example, when issues such as rising unemployment rates, resource shortages, or deteriorating public safety

arise in society, individuals are more likely to attribute responsibility to ‘outsider groups,’ ‘ethnic minorities,’ or ‘marginalised populations’ rather than analysing macro-structural or systemic factors. This tendency toward internal attribution simplifies problem analysis, allowing individuals to quickly identify a ‘culprit’; on the other hand, it stimulates emotional moral judgements and generalised attributions outside the context, thereby providing psychological justification for hostile behaviour. Additionally, hate crimes often exhibit a ‘defensive attack’ pattern, where perpetrators perceive the target group as a threat to social order or cultural security, thereby cognitively rationalising their aggressive behaviour as ‘pre-emptive’ or ‘seeking justice.’ Attribution biases amplify group differences and overlook individual behavioural diversity, causing hateful behaviour to become cognitively detached from guilt and embedded within a moral narrative. Therefore, identifying and intervening in attribution biases is a crucial pathway to understanding the motivational structure of hate crimes.

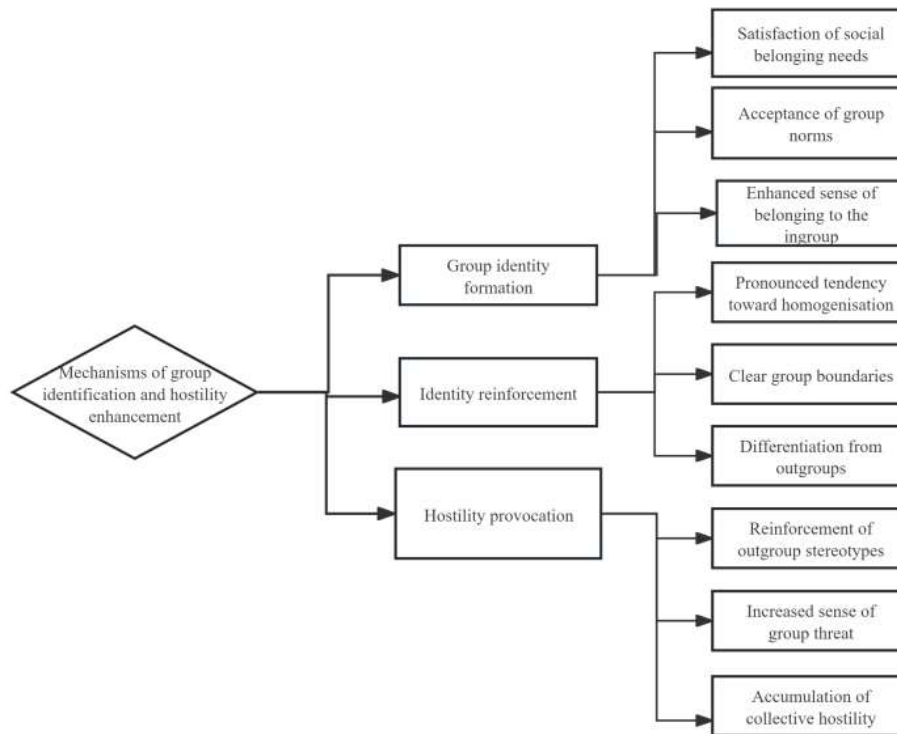


**Figure 2.** Attribution bias and hate crime motivation flowchart

### 4.3. Group Identification and Hostility Amplification Mechanisms

Group identity is a fundamental process in social cognition and a key variable in the emergence and escalation of hate crimes. When individuals strongly identify with a particular group, they are more inclined to defend the group's interests, norms, and values, and to develop vigilance or even hostility toward outgroups. Under the influence of cognitive biases, this identification can easily trigger in-group preference and out-group denigration, i.e., overestimating the positive traits of one's own group and underestimating the positive contributions of other groups. Social comparisons between groups intensify perceptions of competition and threat, especially during periods of resource scarcity or social turmoil, making it easier to trigger an adversarial mindset of ‘us’ versus ‘them.’ Additionally, group identity reinforces homogeneity, meaning that individuals may adopt extreme views to maintain consistency with the group, or even engage in radical behaviour under group pressure to demonstrate loyalty. Furthermore, when group identity is combined with deep-rooted cultural factors such as ethnicity, religion, or political ideology, its emotional contagion and mobilisation capabilities

are significantly enhanced, transforming what should be rationally addressed social conflicts into emotional confrontations. In this context, hate crimes are not merely individual acts but often exhibit collective and symbolic trends. Therefore, strong group identity in specific social contexts may serve as a psychological platform for the accumulation of hostile emotions and the outbreak of violent behaviour, thereby facilitating the commission of extreme hate-driven acts.



**Figure 3.** Flowchart of the mechanism of group identification and increased hostility

## 5. THE COGNITIVE MECHANISM OF HATE CRIMES FROM THE PERSPECTIVE OF ELABORATE PROCESSING THEORY

### 5.1. Information Processing Hierarchy and the Solidification of Prejudice

The Elaboration Likelihood Model posits that individuals process information through two distinct pathways: central processing and peripheral processing, which correspond to different depths of information processing. In the central pathway, individuals possess high motivation and cognitive resources, tending to engage in logical reasoning and evaluation of information. In contrast, the peripheral pathway relies more on external cues such as emotions, authority, and social cues to make rapid judgments. In contexts involving hate crimes, perpetrators often lack the motivation to engage in deep cognitive processing of target groups, thus tending to adopt the peripheral processing pathway, simplifying information through social biases, stereotypes, or hate speech. Over time, this shallow processing mechanism is repeatedly activated, leading to the gradual solidification and internalisation of negative cognitions toward heterogeneous groups into stable attitudes. Especially in online spaces or closed communities, the echo chamber effect enhances selective exposure and selective memory, further reinforcing the tendency to process negative information. As such, the elaborative processing pathway not only determines how individuals process group information but also profoundly influences the formation and maintenance of biases, ultimately constituting a crucial foundation for the cognitive mechanisms underlying hate crimes.

## **5.2. The Interactive Effects of Emotional Reinforcement and Cognitive Biases**

Within the framework of the elaboration likelihood model, emotional factors play a central role in the peripheral processing pathway, particularly in issues involving social identity and threat, where emotions often become the core variables driving judgment and decision-making. When individuals encounter negative information related to target groups, if such information carries high emotional arousal—such as anger, fear, or shame—it is more likely to be processed and remembered. This emotional reinforcement not only exacerbates negative perceptions of outgroups but also reduces individuals' receptivity to countervailing information, thereby deepening existing cognitive biases. Additionally, emotional states influence individuals' choice of information processing pathways; negative emotions often prompt individuals to abandon central processing pathways and instead adopt more easily accessible peripheral processing pathways, leading to rapid yet incomplete cognitive patterns. In the psychological chain leading to hate crimes, this interplay between emotion and cognition enables individuals to make extreme judgements in a short period of time and exhibit highly aggressive and irrational behaviour. Furthermore, the 'justification' emotional framework imposed by society or groups is more likely to prompt individuals to vent their emotions through violent behaviour, completing the transition from cognitive bias to behavioural implementation.

## **5.3. The Mechanism Linking Elaborative Processing and Violent Behaviour**

Elaborative processing theory reveals the close relationship between the depth of information processing and attitude formation. In the context of hate crimes, this theory helps explain why individuals quickly turn to violent behaviour when faced with specific social stimuli. When individuals are unable to engage in deep thinking due to factors such as insufficient motivation, time pressure, or information overload, they resort to peripheral processing, relying on external cues and emotional judgements. At this point, highly symbolic and emotionally charged group labels, hate speech, and inflammatory language exert a significant influence on individuals. This processing method reduces the complexity of information judgement and diminishes the likelihood of self-reflection, thereby bypassing rigorous moral filtering or internalised social norms that would otherwise constrain violent behaviour. Additionally, in group settings, when multiple individuals share the same cognitive and emotional states, peripheral processing pathways are further amplified, leading to 'cognitive polarisation' and 'diffusion of responsibility' effects, thereby prompting individuals to engage in collective violence. In this process, the Elaboration Likelihood Model not only helps reveal the mechanisms through which cognitive pathways influence behaviour but also highlights the importance of focusing on information dissemination quality, social emotional regulation, and group structure in preventing hate crimes.

## **6. CONCLUSION**

This paper systematically explores the role of cognitive biases in the formation of hate crimes based on the elaboration theory. The study finds that the long-term accumulation of biases and stereotypes, attribution biases that single out a single cause for social problems, and the polarising effect of group identity collectively form the foundation of perpetrators' hostile cognition. The peripheral processing mode in the elaboration theory provides a psychological channel for the consolidation and dissemination of these biases. When individuals lack motivation or cognitive resources, they are more likely to accept information laden with emotional, symbolic, and social pressure, thereby abandoning rational analysis via the central pathway and rapidly forming hostile attitudes toward specific groups and psychological preparedness to justify violence. Concurrently, emotional reinforcement mechanisms accelerate the conversion between cognition and action, rendering hateful behaviour more explosive and collective. This study not only explains the formation mechanisms of hate crimes from a cognitive psychological perspective but also highlights the important roles of the information environment and emotional atmosphere. In future practices to prevent and control hate crimes, it is

imperative to strengthen the identification and intervention of biased information, enhance the depth of public information processing, and construct an inclusive group identity framework to weaken the formation and activation pathways of hate cognition from its roots.

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