



RIETI Discussion Paper Series 25-E-052

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Ethnicity and Judicial Discrimination:

Exploring punitive and sympathetic sentencing mechanisms through a survey experiment in Japan*

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Abstract

Ethno-racial majority jurors often issue discriminatory sentences against minority perpetrators, particularly when the victim is co-ethnic. Despite extensive research, the mechanisms and non-Western contexts remain understudied. We propose that the mechanisms driving interethnic discriminatory sentencing may be either punitive, reflecting a motivation to punish out-group members, or sympathetic, indicating a tendency to favor in-group members. Our survey experiment involved 4,000 Japanese citizens acting as jurors in a hypothetical criminal case. Contrary to our initial hypotheses, we found no significant differences in sentencing based on the ethnicity of the perpetrator or victim. However, sentences were significantly longer when the perpetrator was Chinese and the victim was Japanese. Further analysis revealed that respondents who viewed immigrants as more threatening were more punitive toward foreign perpetrators, regardless of the victim's ethnicity. These findings suggest that punitive mechanisms, driven by perceived threats, predominantly influence discriminatory sentencing, whereas sympathetic mechanisms play a lesser role.

Keywords: ethnic discrimination, survey experiments, jury

JEL classification: D72, D91, K42

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*This study is conducted as a part of the Project “Challenges to Achieving a Sustainable Society: Exploring solutions through a social science approach utilizing experiments and data” undertaken at the Research Institute of Economy, Trade and Industry (RIETI).

The draft of this paper was presented at the RIETI DP seminar for the paper. I would like to thank participants of the RIETI DP Seminar for their helpful comments.

This study utilizes the micro data of the questionnaire information based on “the Basic Survey of Japanese Business Structure and Activities” which is conducted by the Ministry of Economy, Trade and Industry (METI), and the Kikatsu Oyako converter, which is provided by RIETI.

Discrimination against racial and ethnic minorities persists in contemporary society across various contexts (e.g., Pager & Shepherd, 2008). This phenomenon is even evident within judicial proceedings, where impartiality is expected to prevail. Numerous empirical studies have documented discriminatory practices by judges and jurors, revealing that racial minorities often receive longer sentences, are more likely to face capital punishment, and have reduced chances of bail approval (Arnold, Dobbie, & Yang, 2018; Sampson & Lauritsen, 1997; Rehavi & Starr, 2014).¹ These findings are supported by observational data from actual court decisions, as well as survey experiments and mock trials. In the United States, survey experimental research has particularly highlighted pronounced discriminatory sentencing patterns in cases involving Black perpetrators and White victims (Alesina & La Ferrara, 2014; Rice, Rhodes, & Nteta, 2022).

Despite these substantial findings, the existing literature is limited by a lack of understanding of the mechanisms and contexts of discrimination. Studies consistently show that White jurors are more likely to render unfavorable decisions in cases involving Black perpetrators and White victims (Rice, et al., 2022), yet the psychological and social processes driving these decisions remain poorly understood. Two potential theoretical mechanisms, punitive and sympathetic, might explain these discriminatory sentencing patterns. The punitive mechanism suggests that discriminatory sentencing stems from negative attitudes toward outgroup perpetrators, shaped by intergroup dynamics such as perceived threats and racial resentment (Blumer, 1958; Rice, et al., 2022; Valentino, et al., 2019). In contrast, the sympathetic mechanism, grounded in social identity theory (Hornsey, 2008; Tajfel & Turner, 1979), posits that discriminatory sentencing emerges from a motivation to protect ingroup

¹ For a comprehensive review, see Hunt (2015), and for meta-analyses, refer to Devine & Caughlin (2014) and Mitchell, et al. (2005).

victims. While both mechanisms could lead to harsher sentences for racial and ethnic minority perpetrators, it remains unclear which mechanism predominates among decision-makers. Although previous studies have elaborated these mechanisms (e.g., Choi, et al., 2022), research on cases involving interethnic violence remains scarce. Our survey experimental study addresses this shortfall by systematically varying the ethnicity (minority versus majority) of both victims and perpetrators in hypothetical vignettes, and by analyzing the interactive effects of perceived threats and nationalism to ascertain the underlying mechanisms influencing judicial decisions.

Moreover, while most related scholarship has been conducted in the United States (Hunt, 2015) and other traditional immigration countries (ForsterLee, et al., 2006; Maeder & Yamamoto, 2019), empirical evidence from other regions remains limited. Notable exceptions include observational studies from countries such as China and Kenya (Choi, et al., 2022; Hou & Truex, 2022). Our study contributes to this literature by examining Japan, a democratic nation experiencing a rapid rise in migration yet characterized by comparatively low levels of racial and ethnic diversity—an environment starkly different from contexts where the majority of ethnic discrimination research has been conducted. By situating our study in Japan, we provide broader insights into judicial discrimination, illustrating how these dynamics may unfold in societies where ethnic heterogeneity is growing but remains relatively limited.

Our preregistered survey experiment shows that, generally, respondents do not judge ethnic minority or majority perpetrators differently, regardless of the victim's ethnicity. However, sentences become significantly longer when the perpetrator is Chinese and the victim is Japanese. Furthermore, our exploratory analyses reveal that respondents who perceive higher levels of immigrant-related threats tend to be more punitive and more likely to hand down discriminatory sentences to ethnically out-group perpetrators, regardless of the victim's ethnicity. Sympathetic mechanisms, by contrast, appear unaffected by perceived threats or

nationalism. These findings suggest that punitive mechanisms predominate within certain segments of the population.

Theory and hypotheses

We propose two mechanisms of biased jury decision-making: punitive and sympathetic. Figure 1 presents an integrated model of these mechanisms. The punitive mechanism involves the jury's tendency to impose harsher sentences on out-group members. The sources of these punitive responses may vary across different target groups, such as gender, ethnic, and racial outgroups. In cases involving ethnic minorities, citizens are often driven by perceived group threats. Group threat theory suggests that in-group members perceive out-group members as threats to valuable resources, leading to negative attitudes toward these out-groups (Blalock, 1967; Blumer, 1958; Valentino, et al., 2019). These perceived threats may concern economic, cultural, and safety issues (Sniderman, Hagendoorn, & Prior, 2004).

Group threat perspectives align with the nature of legal punishment, which involves both retroactive (i.e., punishment for past crimes) and preventative (i.e., deterrence against future crimes) elements. Those who perceive threats from ethnically out-group members have more negative attitudes and are inclined to impose harsher sentencing against them. Alternatively, a higher level of perceived threats from out-groups motivates jurors to mitigate future sources of threats by imposing longer sentences. The former may reflect individualistic concerns, while the latter indicates sociotropic concerns. Previous studies have supported both underlying motivations. For instance, using survey experiments, Rice and colleagues showed that White American respondents with higher level of racial resentment tend to give longer sentences to Black defendants. Conversely, sociotropic concerns have resulted in longer sentences; following the Civil Rights Act of 1965, an increase in the incarceration rates of African Americans was observed in some states—a political strategy to limit their political

participation and reduce perceived political threats from African American communities among White populations (Eubank & Fresh, 2022).

A substantial body of literature indicates that punitive mechanisms, driven by perceived group threats, account for severe judicial punishments against ethnic minorities (Vogel & Messner, 2024). Hou and Truex (2022) found that in regions with large minority populations, sentences for drug cases involving ethnic minorities—which do not involve a specific victim—are longer. However, in cases of interethnic violence where out-group members victimize in-group members, punitive responses are only one aspect of the underlying mechanisms. Such severe sentencing can reflect either negative attitudes toward out-groups or a preference to protect in-group members (see Portmann & Stojanović, 2022, for an analysis of these mechanisms in the context of ethnic voting).

We refer to the latter preference as the sympathetic mechanism. Rooted in social identity theory, this mechanism suggests that individuals, especially those who strongly identify with their in-group members, are predisposed to favor in-group members over others. This general tendency is supported by meta-analysis evidence (Balliet, Wu, & De Dreu, 2014; for review, see Gómez, et al., 2020). In-group bias is also evident in judicial decisions (e.g., Gazal-Ayal & Sulitzeanu-Kenan, 2010; Shayo & Zussman, 2011), although these studies have not definitely ruled out the possible influence of punitive mechanisms. Choi et al. (2022) analyzed criminal cases and revealed that judges tend to give favorable judgments to coethnic defendant because they are more likely to trust the testimony of coethnic defendants, while not necessarily harboring dislike toward defendants from different ethnic groups. This supports the notion of in-group favoritism rather than out-group derogation. However, their research does not exclusively focus on violent cases and pays little attention to the ethnicity of the victims.

In practice, the relationship between the groups to which perpetrators and victims belong can be categorized into four interaction scenarios, as presented in Figure 1. Here,

perpetrators and victims are classified as either in-group (i.e., Japanese) or out-group (i.e., foreigners). Punitive mechanisms lead to longer sentences when the perpetrators are foreigners, regardless of the victim's ethnicity. In contrast, sympathetic mechanisms result in enhanced sentencing when the victims are members of the in-group.

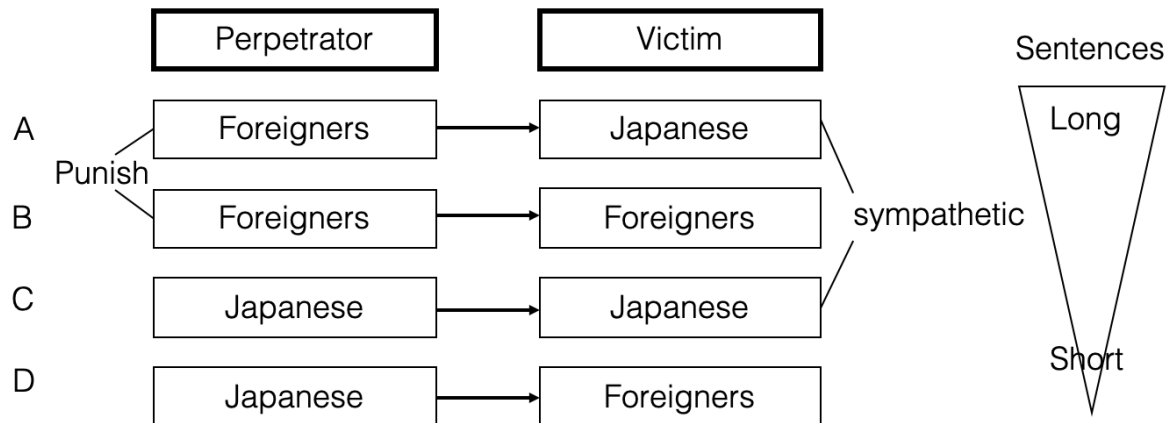


Figure 1. Four interaction scenarios in our study and predicted sentence length

Note: This figure illustrates four possible scenarios (A, B, C, and D) based on the group identities of perpetrators and victims—either in-group (Japanese) or out-group (foreigners). Each scenario predicts varying lengths of sentences shaped by the interplay of punitive and sympathetic mechanisms. The figure visually shows how these mechanisms are expected to affect sentencing outcomes more prominently.

Combining the punitive and sympathetic mechanisms, we propose that Japanese citizens will impose harsher sentences for crimes involving out-group perpetrators and in-group victims, compared to scenarios where both the perpetrator and the victim are members of an out-group. The validation of this hypothesis would suggest that the harshest sentences occur when both punitive and sympathetic mechanisms are activated.

Hypothesis 1 (Scenario A vs. Scenario B): Japanese respondents impose longer sentences on a suspect when the suspect is a foreigner and the victim is Japanese (i.e., an out-group

committing against an in-group) than when both the suspect and the victim are foreigners (i.e., an out-group committing against another out-group).

Second, the sympathetic mechanism suggests that in the absence of punitive mechanisms (i.e., when the perpetrator is an in-group member), jury decisions are more sympathetic toward in-group victims than out-group victims, and jurors are more inclined to impose harsher sentences to the perpetrator. This leads us to our second hypothesis, focusing on scenarios where the perpetrator is an in-group member:

Hypothesis 2 (Scenario C vs. Scenario D): Japanese respondents impose longer sentences on a suspect when both the suspect and the victim are Japanese (i.e., an in-group committing against its own in-group) than when the suspect is Japanese and the victim is a foreigner (i.e., an in-group committing against an out-group).

Third, we aim to examine the relative strength of the punitive and sympathetic mechanisms by analyzing cases involving only out-group members or only in-group members. This approach allows us to isolate and compare the effects of each mechanism, providing insights into their relative importance. We hypothesize that the punitive mechanism will be more pronounced due to the heightened perception of safety threats posed by out-groups (Helbling & Traunmüller, 2020; Lahav & Courtemanche, 2012).

Hypothesis 3 (Scenario B vs. Scenario C): Japanese respondents impose longer sentences on a suspect when both the suspect and the victim are foreigners (i.e., an out-group committing against another out-group) than when both the suspect and the victim are Japanese (i.e., an in-group committing against its own in-group).

Finally, we test the heterogeneous effects of nationality, exploring whether both mechanisms introduce variability based on the ethnicity of out-groups. Specifically, the favorability of ethnic groups may determine the extent of treatment effects (e.g., Igarashi & Mugiyama, 2023; Koopmans, Veit, & Yemane, 2019). We hypothesize that the effects related to perpetrators and victims become more pronounced when the ethnic minority groups involved in the case are less favored.

Hypothesis 4: The disparity in sentencing lengths across scenarios (described in H1, H2, and H3) diminishes when the foreign individual involved hails from a more favored out-group as opposed to a less favored out-group.

We further explore the theoretical expectations behind the punitive and sympathetic mechanisms, although these were not pre-registered in our analysis plan. As previously discussed, we posit that punitive mechanisms are driven by perceived group threats. Specifically, individuals perceiving higher levels of threat may impose longer sentences on out-group members. Conversely, sympathetic mechanisms are notably prominent among those who highly identify with their in-group, driven by their heightened solidarity with in-group members and efforts to protect them (Zmigrod, Rentfrow, & Robbins, 2018). We operationalize strong in-group identification through nationalism and hypothesize that sympathetic mechanisms are more pronounced among individuals with stronger Japanese nationalism.

Research design

To test our hypotheses, we conducted a pre-registered online survey experiment in March 2024.² We recruited Japanese citizens aged 20 to 79 from Rakuten Insights, one of the largest opt-in web survey companies in Japan. We set quotas based on gender, age, and region of residence to match the population demographics. Respondents who failed the attention check at the beginning of the survey were excluded, resulting in a final sample size of 4,000. For sample statistics, refer to Table A1 in the Appendix.

In the survey, respondents assumed the role of juries, deliberating alongside professional judges in a hypothetical criminal case where one man stabbed another during a street fight. They were informed that the prosecution sought a 15-year sentence for murder, while the defense contended that the stabbing was accidental and advocated for a five-year sentence. Respondents were tasked with determining the appropriate sentence length for the defendant. The names and nationalities of the perpetrator and victim varied among Japanese, German, Vietnamese, and Chinese backgrounds, chosen to explore varying preferences toward these groups and enhance the realism of the experiment. Prior research indicates a hierarchy of preferences, with Western individuals (including those from West European and North American) highly favored, Central Asian and South Americans regarded neutrally, and Chinese and South Koreans the least preferred (Igarashi & Mugiyama, 2023). In addition, the Chinese and Vietnamese represent the two largest migrant groups in Japan. In scenarios, a Japanese individual could be either a perpetrator or a victim, whereas minority groups were portrayed only as perpetrators or victims when paired with Japanese individuals or other members of their ethnic group. Each respondent evaluated a single case. Further details about the vignette and the exact wording of the questions are available in the Appendix.

² The anonymous version of our pre-analysis plan is registered and publicly accessible at AsPredicted, which can be viewed at <https://aspredicted.org/9sdm-vtcq.pdf>.

We used the sentence length provided by respondents as the dependent variable, with experimental conditions serving as independent variables. Sentences ranged from 0 to 20 years—the maximum for murdering one person. The average sentence length was 12.38 years, with a standard deviation of 5.05. To test Hypotheses 1 to 3, we aggregated victims and perpetrators into in-group (Japanese) and out-groups (non-Japanese), generating four patterns of cases. For Hypothesis 4, we analyzed all combinations of perpetrators and victims. Regression analyses were conducted, and predicted values for each combination will be presented. To exploratively examine the mechanisms behind the punitive and sympathetic mechanisms, we further tested interactions between experimental treatments and respondents' perceived threats and nationalism. Both variables were measured using multiple items, and factor scores were generated for each.³

Results

Main results

³ Measurements for perceived threats are operationalized through three items, each with corresponding factor loadings: “Do you think that an increase in the number of immigrants is good for the Japanese economy?” (.832), “Do you think that an increase in the number of immigrants is good for Japanese culture?” (.842), and “Do you think it is good that people from other countries have the right to immigrate to Japan?” (.847). Nationalism is measured using the following items, each also noted with their factor loadings: “I would rather be a Japanese citizen than a citizen of any other country (.701)”, “The world would be a better place if people in other countries were more like the Japanese (.634)”, and “Generally speaking, Japan is a better country than many others (.722)”.

We summarize the results of our experiment in Figure 2, which compares four combinations of perpetrators and victims drawn from different group statuses. The predicted sentencing outcomes for these combinations are plotted in the figure. Hypothesis 1 posited that foreign perpetrators attacking Japanese victims would receive longer sentences than foreign perpetrators attacking foreign victims. Hypothesis 2 suggested that Japanese perpetrators attacking Japanese victims would be sentenced more severely than Japanese perpetrators attacking foreign victims. Hypothesis 3 proposed that foreign perpetrators attacking foreign victims would receive harsher sentences than Japanese perpetrators attacking Japanese victims.

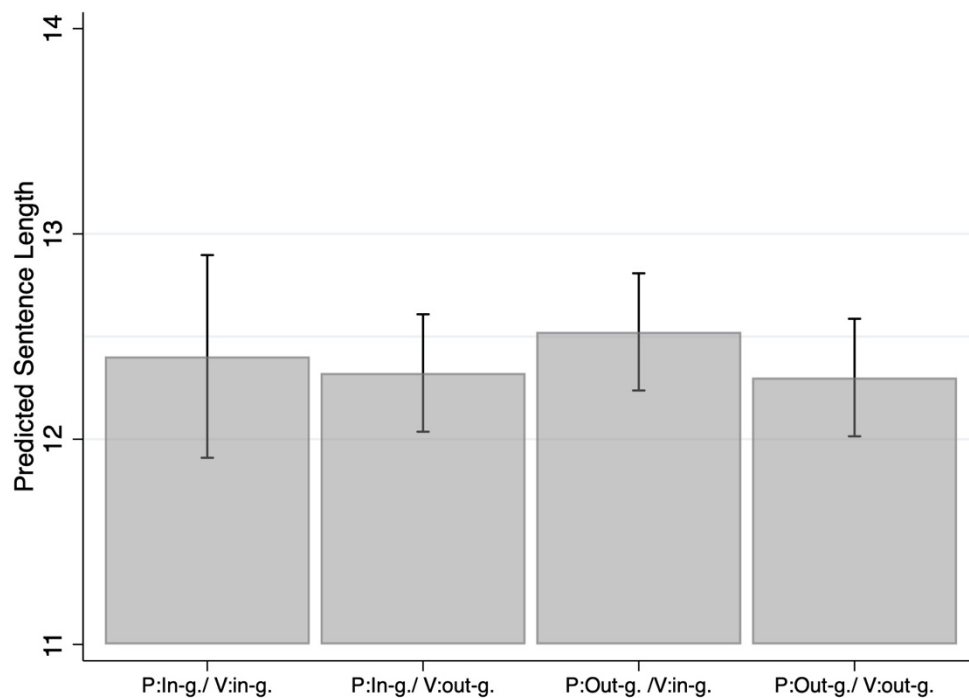


Figure 2. Estimated sentences by group involvement

Note: This figure displays the coefficients and their 95% confidence intervals for each experimental condition. “P” indicates the perpetrator, and “V” denotes the victim. The figure displays the predicted sentencing differences among various combinations of in-group (Japanese) and out-group (foreign) perpetrators and victims, illustrating the absence of significant disparities across the conditions tested. See Table A2 in the Appendix for more details.

Contrary to our expectations, Figure 2 reveals no statistically significant differences among the four groups. We reassessed these findings using different reference groups for statistical testing, but the results remained non-significant. Specifically, the comparison of the third and fourth bars in Figure 2 (testing Hypothesis 1) yielded a regression coefficient b of -0.222 with a standard error (SE) of 0.026, and a p -value of 0.281. To evaluate Hypothesis 2, we compared the first and second bars, resulting in $b (SE) = -.081 (.291)$ with a p -value of 0.781. Hypothesis 3 was examined by comparing the second and fourth bars, where $b (SE) = -.022 (.206)$ with a p -value of 0.915. In summary, none of our initial three hypotheses were supported, indicating that Japanese citizens' sentencing decisions are not influenced by an in-group bias favoring their own national group over foreigners.

We formulated a fourth hypothesis predicting that sentencing disparities observed in the first three hypotheses would be more pronounced when involving individuals from unfavorably viewed out-groups, specifically Chinese. To assess this hypothesis, we disaggregated the out-group conditions by nationalities, including Germans, Vietnamese, and Chinese. The results, presented in Figure 3, compare all combinations of perpetrators and victims.

The findings indicate that, relative to the baseline condition involving Japanese perpetrators and victims (the first bar in Figure 3), respondents imposed significantly longer sentences only in the scenario involving Chinese perpetrators and Japanese victims (the second bar in Figure 3). This pattern aligns with prior research on the death penalty, which finds that harsher sentences are typically reserved for cases where minority perpetrators offend against members of the majority or a favored group—such as when Black perpetrators are accused of crimes against White victims in the United States (Alesina & La Ferrara, 2014). However, sentences for crimes involving other ethnic out-groups against Japanese victims did not significantly differ from those involving Japanese perpetrators and victims. Thus, it appears

that punitive and sympathetic mechanisms are activated primarily when the perpetrator belongs to the most negatively perceived group.

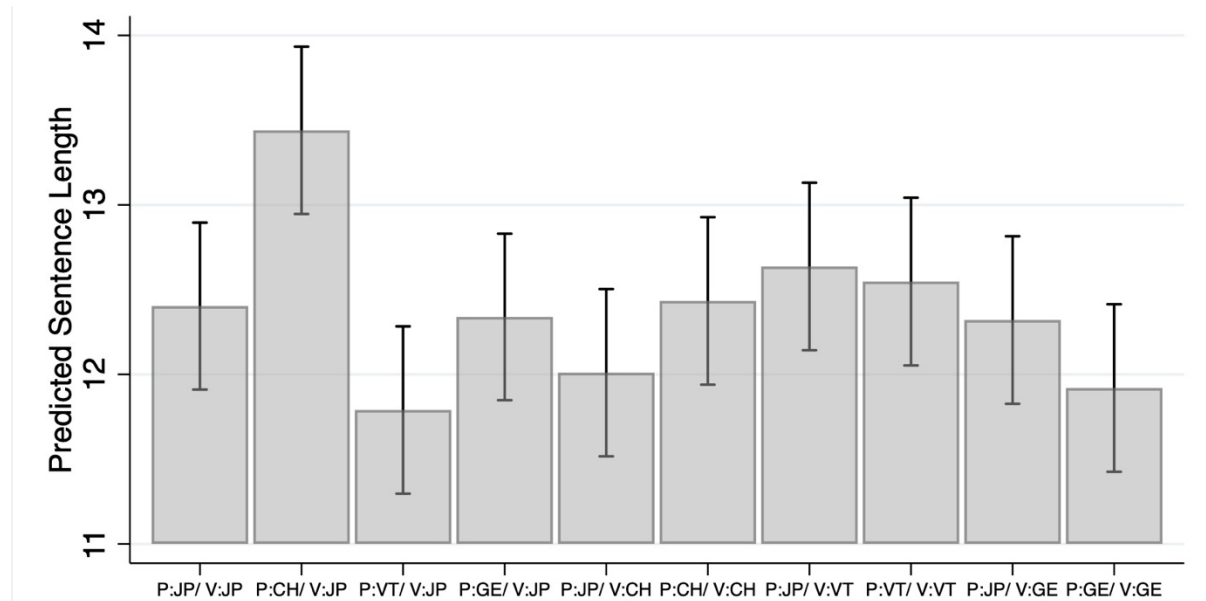


Figure 3. Comparisons of estimated sentences across all treatment combinations

Note: This figure displays the coefficients and the 95% confidence intervals for each experimental condition. Key: JP; Japanese, CH; Chinese, VT; Vietnamese, GE; German, P: perpetrator, V: victim. For additional details, see Table A3 in the Appendix.

Heterogeneous effects

To further investigate the heterogeneous effects of our experimental treatments, we analyzed how perceived group threats influence sentencing decisions. It is important to note that this analysis was not preregistered. Building on the punitive mechanism framework—which posits that perceived group threats significantly affect judicial decisions against out-group perpetrators—we assessed the conditional effects of these perceived threats by calculating factor scores and interacting them with all combinations of experimental treatments, as depicted in Figure 3.

The results, presented in the Figure 4, illustrate the marginal effects of perceived threats. We find that sentence lengths increase as respondents perceive greater threats from out-group perpetrators. In contrast, perceived threats do not affect sentence lengths when the perpetrators

are Japanese, regardless of the victims' ethnicity. Notably, the effects of victim ethnicity do not appear significant; sentences for cases involving Japanese victims and those involving foreign victims show no statistical difference. These findings suggest that punitive mechanisms, rather than sympathetic ones, predominantly shape sentencing decisions in these scenarios.

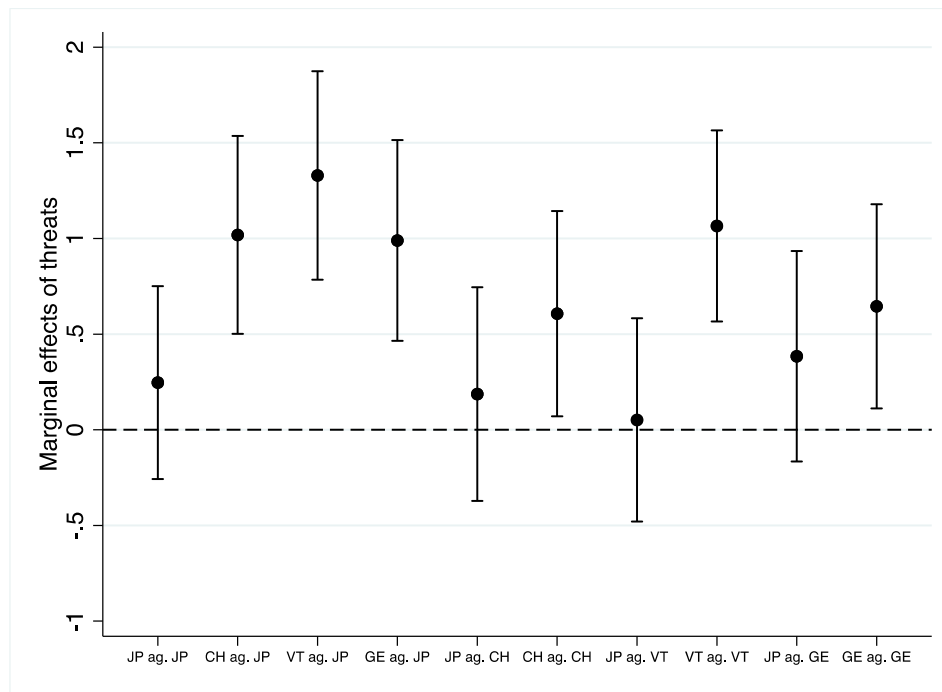


Figure 4. Marginal effects of perceived threats on sentence lengths under different experimental conditions

Additionally, we examined whether nationalism produced heterogeneous effects on sentencing decisions. We hypothesized that individuals with stronger nationalist sentiments would exhibit greater empathy toward in-group members, thus imposing longer sentences when the victim was Japanese. However, contrary to our expectations, the results presented in Figure 5 indicate that respondents' reactions to the experimental conditions did not vary significantly by their levels of nationalism. These findings challenge our assumption that sympathetic mechanisms would be more pronounced among individuals with higher Japanese

nationalism. Instead, the absence of variation suggests that nationalism-driven sympathetic mechanisms are not evident in our data.

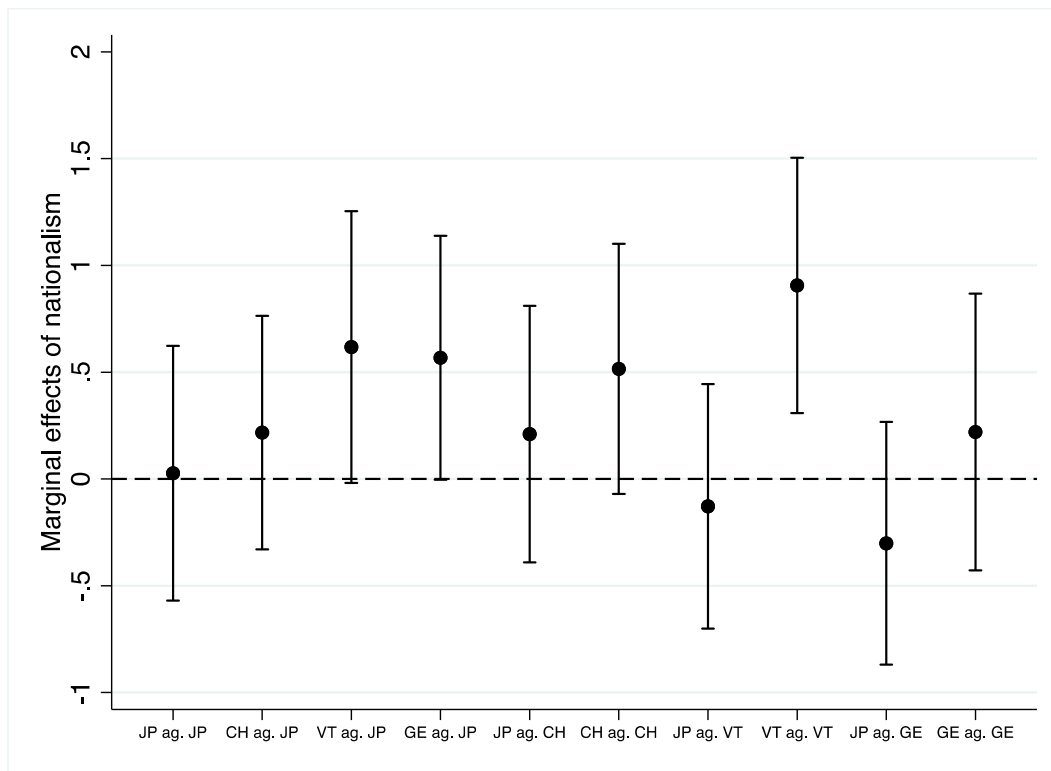


Figure 5. Marginal effects of nationalism on sentencing lengths under different experimental conditions

Conclusion

This study sought to unravel the dynamics underlying judicial decisions in interethnic cases. While previous research has shown that ethnic and racial minority perpetrators often receive harsher punishments when the victims are in-group members (e.g., Alesina & La Ferrara, 2014; Rice, et al., 2022), the motivations driving these disparities have remained unclear. It is uncertain whether such disparities are due to punitive motivations—where in-group jurors disproportionately penalize out-group members—or sympathetic motivations—where in-group jurors aim to defend in-group victims. We explored these dynamics within a Japanese context by varying the nationalities of perpetrators and victims in a hypothetical criminal case.

Our findings reveal that Japanese respondents impose longer sentences when the perpetrator is Chinese and the victim is Japanese. Further analysis indicated that respondents who perceive higher threat levels impose longer sentences on foreign perpetrators, regardless of the victim's nationality. However, no similar pattern was observed for Japanese victims. Notably, higher levels of nationalism did not correlate with increased protection for Japanese victims.

Our results suggest that the harsher treatment of out-group perpetrators is primarily attributed to punitive motivations driven by perceived threats. Respondents with heightened threat perceptions were more likely to punish foreign perpetrators, leading to longer sentences. However, these motivations were not uniformly observed; only a subset of respondents, those with significant threat perceptions, imposed longer sentences. A notable exception was the harsher sentences assigned to Chinese perpetrators, potentially influenced by the strained relations between Japan and China (Wimmer, et al., 2024), which may exacerbate intergroup threats and intensify punitive actions against Chinese perpetrators. These findings suggest that punitive mechanisms, influenced by specific intergroup tensions, such as those between Chinese and Japanese, or historically between Blacks and Whites (e.g., Alesina & La Ferrara, 2014), predominantly determine judicial bias. The influence of specific intergroup relations, rather than a general distinction between out-groups and in-groups, appears to drive these judicial biases.

Contrarily, sympathetic motivations appeared to exert no effect on sentence length, as the impact of out-group perpetrator status was moderated by threat perceptions, whereas that associated with in-group victim status was not moderated by nationalism. These findings challenge previous studies that identified an in-group bias in judicial decisions (e.g., Gazal-Ayal & Sulitzeanu-Kenan, 2010; Shayo & Zussman, 2011), which did not differentiate between in-group protection and out-group punishment. Furthermore, the absence of sympathetic mechanisms is corroborated by studies like those by Sokolić and colleagues (2024),

who observed no in-group protection bias in domestic war crime trials. Additionally, the finding that nationalism does not moderate the effects of in-group victim cues is promising, as it suggests nationalism does not necessarily undermine fairness in judicial decision-making. This tendency, where nationalism does not adversely affect out-group benefits, aligns with broader intergroup relations studies (Charnysh, Lucas, & Singh, 2015; Wimmer, et al., 2024), underscoring the potentially benign nature of nationalism and warranting further investigation.

In summary, our study posits that punitive motivations against out-group perpetrators, particularly in cases involving politically contentious out-groups or individuals with elevated threat perceptions, are more influential on judicial decision-making than sympathetic motivations for in-group victims. These findings imply that heightened threat perceptions, which may be unrelated to the specifics of the case, could distort judicial decisions, highlighting the necessity for judges and jurors to be aware of these biases.

Although our survey experiment, which used hypothetical vignettes to explore biases against minorities in jury trials, yielded valuable insights, it also has limitations. Typical jury trials involve extensive testimony and deliberation—components difficult to replicate in survey-based vignettes. Consequently, our survey experiment may have captured more immediate, day-to-day biases rather than the fully deliberative process. Mock trials (e.g., Devine & Caughlin, 2014) can more closely approximate real-world jury deliberations, but as Rice et al. (2022) point out, they often rely on student samples that do not reflect the older demographics typical of actual juries. Recognizing concerns about ecological validity, some researchers have adopted more realistic experimental designs (e.g., Hainmueller, Hangartner, & Yamamoto, 2015). In keeping with this trend and with previous studies (e.g., Rice, et al., 2022), we opted for a survey vignette experiment for our research. Nevertheless, future research should strive to incorporate richer information and interactions that mirror those faced by real jurors, thereby more accurately capturing the complexities of judicial decision-making.

Finally, our vignettes focused on a violent crime involving a fatal stabbing. It remains unclear whether similar patterns would arise for offenses without a clear victim, such as shoplifting, drug use, or national security violations. Under such circumstances—where there is no explicit victim to protect—the sympathetic mechanism may remain absent, while the punitive mechanism could still function. Given the strained relations between certain nations, punitive actions might be more pronounced even in crimes typically not brought before juries (with limited exceptions, such as psychoactive drug use under Japanese law). Examining these scenarios could offer additional insights into how the punitive mechanism shapes public attitudes toward criminal offenders in the context of intergroup relations.

Competing Interests: The authors declare none.

Reference

- Alesina, A., & La Ferrara, E. (2014). A test of racial bias in capital sentencing. *American Economic Review*, 104(11), 3397-3433.
- Arnold, D., Dobbie, W., & Yang, C. S. (2018). Racial bias in bail decisions. *The Quarterly Journal of Economics*, 133(4), 1885-1932.
- Balliet, D., Wu, J., & De Dreu, C. K. (2014). Ingroup favoritism in cooperation: a meta-analysis. *Psychological bulletin*, 140(6), 1556.
- Blalock, H. M. (1967) *Toward a theory of minority group relations*. Wiley, New York
- Charnysh, V., Lucas, C., & Singh, P. (2015). The ties that bind: National identity salience and pro-social behavior toward the ethnic other. *Comparative political studies*, 48(3), 267-300.
- Choi, D. D., Harris, J. A., & Shen-Bayh, F. (2022). Ethnic bias in judicial decision making: Evidence from criminal appeals in Kenya. *American Political Science Review*, 116(3), 1067-1080.
- Devine, D. J., & Caughlin, D. E. (2014). Do they matter? A meta-analytic investigation of individual characteristics and guilt judgments. *Psychology, Public Policy, and Law*, 20(2), 109.
- Eubank, N., & Fresh, A. (2022). Enfranchisement and incarceration after the 1965 Voting Rights Act. *American Political Science Review*, 116(3), 791-806.
- Gómez, A., Chinchilla, J., Vázquez, A., López-Rodríguez, L., Paredes, B., & Martínez, M. (2020). Recent advances, misconceptions, untested assumptions, and future research agenda for identity fusion theory. *Social and Personality Psychology Compass*, 14(6), e12531.

- Hainmueller, J., Hangartner, D., & Yamamoto, T. (2015). Validating vignette and conjoint survey experiments against real-world behavior. *Proceedings of the National Academy of Sciences*, 112(8), 2395-2400.
- Helbling, M., & Traunmüller, R. (2020). What is Islamophobia? Disentangling citizens' feelings toward ethnicity, religion and religiosity using a survey experiment. *British Journal of Political Science*, 50(3), 811-828.
- Hornsey, M. J. (2008). Social identity theory and self-categorization theory: A historical review. *Social and Personality Psychology Compass*, 2(1): 204-222.
- Hou, Y., & Truex, R. (2022). Ethnic discrimination in criminal sentencing in China. *The Journal of Politics*, 84(4), 2294-2299.
- Hunt, J. S. (2015). Race, ethnicity, and culture in jury decision making. *Annual Review of Law and Social Science*, 11(1), 269-288.
- ForsterLee, R., ForsterLee, L., Horowitz, I. A., & King, E. (2006). The effects of defendant race, victim race, and juror gender on evidence processing in a murder trial. *Behavioral sciences & the law*, 24(2), 179-198.
- Gazal-Ayal, O., & Sulitzeanu-Kenan, R. (2010). Let my people go: Ethnic in-group bias in judicial decisions—Evidence from a randomized natural experiment. *Journal of Empirical Legal Studies*, 7(3), 403-428.
- Igarashi, A., & Mugiya, R. (2023). Whose tastes matter? Discrimination against immigrants in the Japanese labour market. *Journal of Ethnic and Migration Studies*, 49(13), 3365-3388.
- Lahav, G., & Courtemanche, M. (2012). The ideological effects of framing threat on immigration and civil liberties. *Political Behavior*, 34, 477-505.

- Koopmans, R., Veit, S., & Yemane, R. (2019). Taste or statistics? A correspondence study of ethnic, racial and religious labour market discrimination in Germany. *Ethnic and Racial Studies*, 42(16), 233-252.
- Maeder, E. M., & Yamamoto, S. (2019). Investigating race salience, defendant race, and victim race effects on mock juror decision-making in Canada. *Justice Quarterly*, 36(5), 929-953.
- Mitchell, T. L., Haw, R. M., Pfeifer, J. E., & Meissner, C. A. (2005). Racial bias in mock juror decision-making: A meta-analytic review of defendant treatment. *Law and human behavior*, 29, 621-637.
- Pager, D., & Shepherd, H. (2008). The sociology of discrimination: Racial discrimination in employment, housing, credit, and consumer markets. *Annu. Rev. Sociol.*, 34(1), 181-209.
- Portmann, L., & Stojanović, N. (2022). Are immigrant-origin candidates penalized due to ingroup favoritism or outgroup hostility?. *Comparative Political Studies*, 55(1), 154-186.
- Rehavi, M. M., & Starr, S. B. (2014). Racial disparity in federal criminal sentences. *Journal of Political Economy*, 122(6), 1320-1354.
- Rice, D., Rhodes, J., & Nteta, T. (2022). Same as it ever was? The impact of racial resentment on white juror decision-making. *The Journal of Politics*, 84(2), 1202-1206.
- Sampson, R. J., & Lauritsen, J. L. (1997). Racial and ethnic disparities in crime and criminal justice in the United States. *Crime and justice*, 21, 311-374.
- Shayo, M., & Zussman, A. (2011). Judicial ingroup bias in the shadow of terrorism. *The Quarterly Journal of Economics*, 126(3): 1447-1484.
- Sokolić, I., Kostovicova, D., La Lova, L., & Vico, S. (2024). Are domestic war crimes trials biased?. *Journal of Peace Research*, 00223433241292143.

- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The Social Psychology of Intergroup Relations* (pp. 33–47). Monterey, CA: Brooks/Cole.
- Ulmer, J. T., & Bradley, M. S. (2006). Variation in trial penalties among serious violent offenses. *Criminology*, 44(3), 631-670.
- Valentino, N. A., Soroka, S. N., Iyengar, S., Aalberg, T., Duch, R., Fraile, M., ... & Kobayashi, T. (2019). Economic and cultural drivers of immigrant support worldwide. *British Journal of Political Science*, 49(4), 1201-1226.
- Vogel, M., & Messner, S. F. (2024). Group threat and social control: Who, what, where, and when. *Annual Review of Criminology*, 7(1), 39-58.
- Wang, X., & Mears, D. P. (2010). A multilevel test of minority threat effects on sentencing. *Journal of Quantitative Criminology*, 26, 191-215.
- Wimmer, A., Bonikowski, B., Crabtree, C., Fu, Z., Golder, M., & Tsutsui, K. (2024). Geo-Political Rivalry and Anti-Immigrant Sentiment: A Conjoint Experiment in 22 Countries. *American Political Science Review*, 1-18.
- Zmigrod, L., Rentfrow, P. J., & Robbins, T. W. (2018). Cognitive underpinnings of nationalistic ideology in the context of Brexit. *Proceedings of the National Academy of Sciences*, 115(19), E4532-E4540.

Online Appendix for “Ethnicity and Judicial Discrimination in Japan: Exploring Punitive and Protective Sentencing Mechanisms through a Survey Experiment”

The vignette and question in Japanese

いま、あなたが裁判員として担当する次のような刑事事件があったとします。それをよく読んで、いくつかの質問にお答えください。

昨年6月に、おしゃれな飲食店やカフェなどが立ち並ぶ商店街の路上でトラブルがあり、近くに住む会社員で【山田隆志さん／中国国籍の馬梓睿さん／ベトナム国籍のホアン・クオン・タンナムさん／ドイツ国籍のグスタフ・ケーニヒスベルガーさん】（当時44歳）が、飲食店従業員で【鈴木陽介／中国国籍の張励勤／ベトナム国籍のグエン・バー・フン／ドイツ国籍のアドルフ・ハイマン】被告（38歳）から腹や背中などを刺され、出血多量で死亡しました。

事件を目撃した男性は、この裁判で次のように証言しました。

「道を歩いていると大きな声が突然したため、振り返ると、2人がつかみ合いの喧嘩をしていた。そのうち興奮した被告の男性が隠し持っていたナイフを取り出して振り回し、被害者の男性を刺したり切りつけたりした。被害者の男性は血を流して路上に倒れこみ、動かなくなってしまったように見えたので、慌てて110番通報をした。こんな場所でこんな事件が起きるのは初めてで恐ろしかった。」

この事件は、被害者が飲食店の前に歩道をふさぐように置かれていた自転車を倒したのに対し、その飲食店に勤務する被告が注意し、トラブルになったことが原因であった。

検察側は、「被告は被害者の肝臓を貫通するほどの相当強い力で刺しており、理不尽な暴力で突然父親を失った家族の苦しみは大きい」として、【鈴木陽介／張励勤／グエン・バー・フン／アドルフ・ハイマン】被告に対して懲役15年を求刑している。それに対して弁護側は、「被告に計画性も殺害の意図もなく、被害者が殴り掛かるなどして偶然に力がかかった可能性もある」と反論し、殺人罪ではなく、傷害致死罪にあたり、懲役5年程度が相当と主張している。

この被告に対して、あなたは懲役何年程度の刑罰を科すのが妥当だと思いますか。0年から20年の間で、あなたが妥当な量刑だと思う年数を選んでください。分からない場合でも、あなたの直観でお答えください。

The vignette and question translated into English

Imagine you are a member of a jury assigned to the following criminal case. Please read the details provided carefully and answer the questions that follow.

In June of the previous year, a disturbance occurred on a street in a shopping district lined with upscale restaurants and cafes. [Takashi Yamada / Chinese national Ma Zirui / Vietnamese national Hoang Quong TanNam / German national Gustav Königsperger], a 44-year-old company employee living nearby, was stabbed in the abdomen and back by [Yosuke Suzuki / Chinese national Zhang Liqin / Vietnamese national Nguyen Ba Hung / German national Adolf Heimann], aged 38, and subsequently bled to death.

A passerby who witnessed the incident provided the following account during the trial: “While I was walking down the street, I was startled by loud voices and turned to see two men grabbing and fighting. The confrontation escalated when the defendant, appearing agitated, pulled out a concealed knife and began stabbing the victim, who subsequently collapsed on the street, bleeding profusely and eventually ceased moving. I panicked and called emergency services at 110. It was frightening because I had never seen an incident like this happen in what is usually a peaceful area.”

The incident occurred when the victim knocked over a bicycle that was blocking the sidewalk in front of a restaurant. The defendant, an employee of the restaurant, confronted him about it, which led to the altercation.

The prosecution has requested a 15-year prison sentence for the defendant [Yosuke Suzuki, Zhang Liqin, Nguyen Ba Hung, and Adolph Hyman], stating, “The defendant stabbed the victim with considerable force, even piercing his liver. The family who suddenly lost their father due to unreasonable violence is suffering greatly.” On the other hand, the defense contends that the defendant had no premeditation or intent to kill, suggesting that the fatal injury could have been accidental, occurring in the heat of the moment as the victim struck the defendant. They argue for a manslaughter conviction, not murder, proposing a more lenient sentence of approximately 5 years.

How many years of imprisonment do you think are appropriate for this defendant? If you are unsure, please use your intuition.

Table A1. Descriptive statistics

	Ratio/Average (SD)
Gender	
Male	49.56%
Female	50.44%
Age	50.509 (16.100)
Education	
Primary or junior high	1.07%
High school	27.07%
Some college	21.55%
University or graduate school	50.30%
Conservative ideology	3.200 (.880)
Threat factor score	.007 (.926)
Nationalism factor score	.000 (.836)

Table A2. Regression results shown in Figure 2

	B (S.E.)
Cases (ref. in-g. against in-g.)	
In-g. against out-g.	−.081 (.291)
Out-g. against in-g.	.119 (.291)
Out-g. against out-g.	−.103 (.291)
N = 4,000	

Table A3. Regression results shown in Figure 3

	B (S.E.)
Cases (ref. JP ag. JP.)	
CH ag. JP	1.037**(.356)
VT ag. JP	−.613 (.356)
GE ag. JP	−.064 (.355)
JP ag. CH	−.393 (.356)
CH ag. CH	.031 (.356)
JP ag. VT	.234 (.356)
JP ag. VT	.145 (.356)
JP ag. GE	−.082 (.356)
GE ag. GE	−.483 (.356)
N = 4,000	