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Cross-Temporal Replication of the Relationship Between SDO and Conservative Political Attitudes in Japan: SDO and Attitudes Shifted but the Relationship Holds

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Abstract

Intergroup conflicts lead to devastating consequences and the elucidation of the cause of conflicts has been one of the central and pressing issues. Previous studies found that social dominance orientation (SDO) is a strong predictor of individual differences in endorsing specific policies that can enhance intergroup conflict, such as increasing defense costs. While the relationship between SDO and some specific policies has been examined in Western contexts, there has been much less research in non-Western contexts. Moreover, previous studies revealed that the relationship varies between non-Western countries. We conducted a study (*N* = 560) to replicate the positive correlation between SDO and political attitudes related to conservatism in Mifune and Yokota (2018) who collected the data in 2012. Using Bayesian inferences, we showed that while SDO and some policy attitudes have changed between samples over the last ten years, the correlation between them remained mostly unchanged even after controlling for conservatism. We discuss the consistency of the relationship between SDO and conservative political attitudes in the past ten years in Japan.

Keywords

Bayesian inference, conservatism, direct replication, intergroup conflict, political attitudes, social dominance orientation

要約

集団間葛藤は深刻な結果をもたらすことから、その原因を明らかにすることは社会心理学における重要かつ喫緊の課題である。先行研究では、社会的支配志向性 (social dominance orientation: SDO) が、防衛費増加の支持など、集団間葛藤を促進し得る特定の政策支持の個人差を強く予測することが示されてきた。SDO と特定の政策態度との関連は西洋の文脈で多く検討されてきた一方、非西洋圏での研究は少なく、さらに非西洋諸国間でその関連の強さが異なることも報告されている。本研究では、Mifune & Yokota (2018) が 2012 年に収集したデータを用いて示した、SDO と保守的政治態度との正の相関の再現を目的とし、日本において 560 名を対象に調査を行った。ベイズ推定の結果、過去 10 年間で SDO や一部の政策態度の平均には変化が見られたものの、保守主義を統制した後でも両者の相関関係はほぼ再現された。本研究は、日本において過去 10 年間にわたる SDO と保守的政治態度の関係の安定性を示すものである。

キーワード

ベイズ推定, 保守主義, 直接的追試, 集団間葛藤, 政治的態度, 社会的支配志向性

Non-Technical Summary

Background

Intergroup conflicts, such as wars, have yielded devastating consequences, but the emergence of them never ceases. Social dominance orientation (SDO), the degree to which individuals endorse dominance-subordination structures between groups, is one of the critical factors associated with the endorsement of political attitudes related to intergroup conflicts. Although previous studies have consistently documented the positive correlation between them, there are only a few studies conducted in non-Western contexts.

Why was this study done?

To gain further insight into the relationship between SDO and political attitudes beyond Western contexts, we replicated and extended Mifune and Yokota (2018). The relationship may have changed substantially since 2012, when Mifune and Yokota (2018) collected their data, given the changes in the political tide and knowledge among the Japanese.

What did the researchers do and find?

We conducted an online study surveying 560 Japanese adults and examined the association between SDO and eleven different political attitudes specific to Japanese contexts (e.g., attitudes towards defense costs, immigration, and constitutional revision). We successfully replicated ten out of eleven associations reported in Mifune and Yokota (2018), although their strength changed. The political attitude whose relationship with SDO was not replicated was the attitude towards the death penalty.

What do these findings mean?

Our findings demonstrate the temporal generalizability of the relationship between SDO and attitudes related to political conservatism. Given that most individuals often do not hold ideologically consistent political beliefs, our study suggests that SDO would be a useful predictor of political attitudes.

Intergroup conflicts such as wars have yielded devastating consequences, but the emergence of them never ceases. As such, the elucidation of causes and psychological underpinnings of intergroup conflicts have been one of the central and pressing issues. Social dominance theory is one of the major theories that explain how intergroup conflicts are initiated and maintained (Sidanius & Pratto, 1999). Social dominance orientation (SDO: Pratto et al., 1994; Ho et al., 2015) is the core variable in social dominance theory and one of the important individual difference variables in prejudice research (e.g., Duckitt & Sibley, 2009). SDO represents individual preferences about intergroup hierarchy (Sidanius & Pratto, 1999), and is suggested to be culturally universal (e.g., Sidanius et al., 1994) and correlated with the endorsement of intergroup conflicts, such as conservative political attitudes (Fischer et al., 2012). Yet, few previous studies were conducted in Asia particularly Japan and investigated little variety of attitudes. Thus, in this research, we aimed to revisit the relationship between SDO and conservative political attitudes in Japan, by directly replicating and extending previous findings offered by Mifune and Yokota (2018).

Social Dominance Theory and Social Dominance Orientation

Social Dominance Theory (SDT) is a framework that explains why multiple socially constructed groups become hierarchically ranked and why those unequal hierarchies are universally maintained (Sidanius & Pratto, 1999). SDT discusses mechanisms that reproduce inequality at three levels: the societal level, the group level, and the individual level (Sidanius & Pratto, 1999, 2012). SDT highlights the role of hierarchical-enhancing ideologies that the beliefs systems justify social hierarchies. These ideologies are defined as the notion that dominant groups deserve more rights while subordinate groups should have their rights limited. Such beliefs are considered as psychological factors sustaining inequality in people's attitudes (Pratto et al., 1994; Sidanius & Pratto, 1999, 2012).

Social Dominance Orientation (SDO) refers to the degree to which individuals endorse dominance-subordination structures between groups and is thus an important individual-level psychological variable to SDT (Ho et al., 2015;

Pratto et al., 1994). Individuals high in SDO show strong support for policies associated with hierarchical-enhancing ideologies that legitimize social strata including the death penalty and welfare cuts (Ho et al., 2015; Pratto et al., 1994). Conversely, those low in SDO tend to favor policies linked to hierarchical-attenuating ideologies, like egalitarianism and human-rights advocacy, which aim to reduce or correct hierarchies (Pratto et al., 1994, 2006). Moreover, those high in SDO are more likely to accept legitimizing myths—shared beliefs that justify social hierarchies—thereby further reinforcing the maintenance of intergroup hierarchies (Sidanius & Pratto, 1999).

SDO and Political Conservatism

SDO is theoretically expected to be associated with political conservatism, and this relationship has been repeatedly confirmed in empirical research (Sidanius & Pratto, 1999). SDO reflects an individual's attitude toward intergroup hierarchy, that is, the endorsement of group-based inequality. As such, political conservatism, which can be seen as an ideology that justifies the maintenance of social hierarchies, is considered to be closely linked to SDO. Indeed, previous meta-analyses showed a strong relation between SDO and conservative political attitudes and revealed that the relationship between them was strong and robust across diverse countries (Fischer et al., 2012). Yet, most previous studies tested the association between SDO and conservative attitudes by measuring attitudes towards political issues in Western countries (e.g., Pratto et al., 1994). Theoretically, the observed relationship found in Western contexts should be generalizable across different cultures (e.g., Sidanius et al., 1994; Sidanius & Pratto, 1999).

However, some previous studies suggest that the relationship between SDO and conservative political attitudes may vary across different cultures (e.g., Pratto et al., 2000; Fischer et al., 2012; Shi, 2001). For example, Pratto et al. (2000) reported a significant correlation between SDO and self-reported political conservatism (how conservative one is about oneself) in Canada and Israel, but not in Taiwan. The presence or strength of the connection between SDO and conservative political attitudes may also vary from culture to culture (e.g., Pratto et al., 2000; Fischer et al., 2012; Shi, 2001). Nevertheless, there is much less research in other cultural and political contexts (cf., Pratto et al., 2000). Therefore, more research in non-Western countries is needed to better understand the cultural universality of the association between SDO and conservative political attitudes.

Japan provides a critical context for testing the generalizability of SDT for at least three reasons. First, as an Educated, Industrialised, Rich, and Democratic (EIRD) country (Henrich et al., 2010), Japan shares fundamental structural features with the Western nations where SDT has been predominantly studied. This structural similarity offers a meaningful basis for comparison, allowing findings from Japan to be interpreted in direct contrast to those from Western contexts. Second, despite this structural similarity, Japan presents a unique sociopolitical environment. In contrast to the dominant liberal-conservative ideological dichotomy in many Western societies, Japan's political landscape has historically featured progressivism (*kakushin-shugi*) as the main counterpoint to conservatism (Nakano, 2016) alongside ongoing domestic political debates on constitutional reform. Third, research examining the relationship between SDO and political attitudes remains scarce in Asian contexts. Japan is one of the few Asian countries where the link has been tested (Liu et al., 2009; Mifune & Yokota, 2018; Mukai & Matsuki, 2022). Taken together, these factors make Japan an ideal setting for a nuanced test of the cross-cultural generalizability of SDT (Pratto et al., 1994; Sidanius & Pratto, 1999).

Within this specific Japanese context, our research seeks to directly replicate and extend the work of Mifune and Yokota (2018), who conducted the most comprehensive investigations into the association between SDO and political attitudes associated with conservatism. Their study covered a wide range of political issues, including both international intergroup conflicts involving Japan such as Senkaku Islands issue and domestic issues such as revising the constitution. They showed that SDO was positively and significantly correlated with conservative political attitudes (those concerning welfare for South Koreans, defense costs, immigration, the Liancourt Rocks[1], constitutional revision, the Senkaku, nuclear power plants, and social welfare) with the exception of attitudes towards the death penalty, consumption tax hike, and the Northern Territory issue. Although some earlier studies examined a positive correlation

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1) The Liancourt Rocks dispute, or Takeshima/Dokdo issue, involves a territorial conflict between Japan and South Korea over a group of islets in the Sea of Japan. Originating from historical claims and exacerbated post-World War II, South Korea currently administers the islets, while Japan maintains sovereignty claims. This longstanding dispute has deep historical roots, contributing to occasional tensions in Japan-South Korea relations.

between SDO and a few specific political attitudes related to conservatism such as support for the death penalty (Mukai & Matsuki, 2022) and the China-Taiwan relationship and the Iraq War (Liu et al., 2009), only Mifune and Yokota (2018) have comprehensively addressed preferences for conservative policy bundles.

In the findings of Mifune and Yokota (2018), the fact that attitudes toward some policies correlated with SDO while others did not is crucial for testing the theoretical predictions of Social Dominance Theory. Policies can differ in whether they involve hierarchical aspects depending on their content. For example, issues like the Liancourt Rocks or the Senkaku involve international territorial disputes, and thus are expected to positively correlate with SDO, which reflects endorsement of intergroup hierarchy[2]. On the other hand, policies such as a consumption tax increase are not necessarily advantageous to any specific social group and therefore are less likely to correlate with SDO. In other words, even when multiple policies are broadly categorized as "conservative," their relationship with SDO may vary depending on whether the policy serves to maintain or challenge hierarchical structures. It is important to directly replicate their results, which demonstrated the correlation depends not on the conservativeness of the policy but on its implications for social hierarchy in Japan, to support the predictions of SDT.

Present Study

The correlations between SDO and conservative political attitudes may have changed substantially since 2012, when Mifune and Yokota (2018) collected their data. Changes in political interest or knowledge could alter the relationships between SDO and conservative political attitudes. Political interest is a facet of political knowledge (Rapeli, 2022), and higher interest is associated with greater consistency between attitudes toward political issues and ideological orientation (Kalmoe, 2020). According to the World Values Survey (WVS), political interest among Japanese respondents has risen slightly from 2010 to 2019 (see Supplementary Materials). Therefore, the relationship between SDO and political attitudes may be stronger in 2022 than it was in 2012.

Additionally, Mifune and Yokota (2018) concluded that the correlation between SDO and some conservative political attitudes was absent by referring to the threshold of $p < .05$. Yet, such null hypothesis statistical testing cannot allow us to directly test the absence of the relationship (Wagenmakers et al., 2018). Therefore, in our replication attempt, we aimed to overcome these limitations by referring to Bayes Factors (BF) and Kass and Raftery's (1995) criteria for hypothesis testing[3]. Unlike p-values, BFs directly evaluate the relative plausibility of null hypotheses and corresponding 95% credible intervals (CI) indicate the probability that the interval contains the true value. This straightforward probabilistic interpretation regarding the parameter's plausible range represents a key advantage for intuitive understanding, particularly when compared to the more complex interpretation of frequentist confidence intervals. Thus, the Bayesian approach is a sensible method to revisit the relationship between SDO and conservative political attitudes. In addition to the BFs testing, to evaluate replication, we employed LeBel et al.'s (2019) criteria; we examined whether the original effect sizes were included in replication credible intervals.

2) Although the Northern Territories dispute is, like the Senkaku and Liancourt issues, a territorial conflict, it did not show a correlation with SDO in Mifune and Yokota (2018). As a possible explanation, they pointed out that "the item may have conflated two different meanings: support for bringing the issue to the International Court of Justice and support for taking assertive action against Russia," which might have weakened the correlation. While this reflects a limitation of the survey item and ideally should be revised for precision, the present study aimed to conduct a direct replication. Therefore, the original wording was retained.

3) According to this criterion, a BF_{10} (or BF_{01}) exceeding 3 implies 'positive' support for the alternative hypothesis (or null hypothesis). A BF above 20 or 150 indicates 'strong' or 'very strong' support, respectively. In contrast, a BF between 1 and 3 suggests the data is 'not worth more than a bare mention,' a phrase we adopt in this article to denote an 'inconclusive' result.

Method

Participants and Design

In February 2022, we recruited 550 participants via Lancers (https://www.lancers.jp/), paid 150 yen per person, and had 560 completed responses. Our target sample size was determined by our budgetary limit. We did not have any a priori data exclusion criteria and used all completed responses for data analyses (308 females, 243 males and nine participants who selected another option or preferred not to respond; M_{Age} = 42.0, SD = 9.2). Our final sample size was more than 2.5 times bigger than the original sample size, and was appropriate and above the recommended replication sample size (Simonsohn, 2015).

We note that we did not conduct an a priori power analysis to determine an appropriate sample size, but this is not a significant issue when employing Bayesian inferences. In Bayesian approaches, since accumulating data continuously updates the probability of the correctness of a hypothesis, it is not necessary to do a priori power analysis. Based on posterior distributions and BFs, the precision of the estimates achieved with our sample size was sufficient to test the hypotheses.

Procedure

Participants were invited to take part in an online questionnaire. After giving consent, participants first answered questions measuring their support for political apologies, expectations of sincerity[4], conservative political attitudes, SDO, and demographic information in this fixed order. However, the order of items for each construct was randomized.

Measurements

Attitudes Related to Conservative Political Attitudes

Table 1 shows 11 items used in Mifune and Yokota (2018): Participants were presented with these 11 items in a randomized order and they indicated their attitudes on the issues by using the scale from 1 (strongly disagree) to 7 (strongly agree).

SDO

We used the SDO_6 scale (e.g., "Some groups of people are simply not the equals of others.", Pratto et al., 1994, p. 763; Pratto et al., 2006, p. 320) translated by Mifune and Yokota (2018). Some studies showed that SDO could be divided into SDO-E and SDO-D (e.g., Ho et al., 2015). Yet, a recent meta-analysis found that these are fairly similar constructs (Berry, 2023), and Mifune and Yokota (2018) used the one-factor model. Therefore, we did not distinguish between SDO-E and SDO-D in the present study in the main results but report results using the SDO-E and SDO-D subscales in the Figure S1 and Table S1 in the Supplementary Materials (see Takahashi et al., 2025S-b). While SDO-E showed a significantly stronger correlation with attitudes towards Social Welfare and the Senkaku issue than SDO-D, the effect sizes for the other items were similar across both sub-dimensions of SDO.

Demographics of Participants

Finally, participants indicated their level of conservatism, sex, age, profession, place of living, and the highest level of completed education. Conservatism was measured with "In politics, we sometimes use the term 'conservative or liberal', where 0 means 'liberal' and 10 means 'conservative'. For example, if you are somewhere in the middle, you would choose 5 on the scale." The item also had an option of "I don't know."[5]

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4) The present study included supplementary items designed to measure support for political apologies (Mifune et al., 2019) and expectations of apology sincerity. However, since these items were not central to the primary objectives of the study, detailed analyses and discussions of these results are omitted from the main text and instead reported in the Supplementary Materials (see Takahashi et al., 2025S-b).

Table 1

Items Measuring Political Attitudes Used in Mifune and Yokota (2018)

| Political Attitudes	Questionnaire[a]	M	SD
Constitution	Article 9 of the constitution (we must not have war potential such as army, navy, and air force) should be revised.	4.33	1.76
Consumption Tax^	Considering the future, a consumption tax hike is inevitable.	4.70	1.69
Death Penalty	Death penalty should continue to be carried out in the future.	5.28	1.60
Defense Costs^	Defense costs such as self-defense force operating expenses should be much reduced.	4.91	1.49
Immigrants^	In the future, we should accept more immigrants from other countries.	4.79	1.64
Liancourt	To tackle the issue about Liancourt Rocks between Japan and South Korea, we should take a resolute attitude such as preventing Koreans from landing Liancourt Rocks by using force rather than having negotiations.	4.59	1.72
Northern Territories	To tackle the issue with Northern Territories, we should actively do something such as filing a complaint against Russia to the International Court of Justice.	5.13	1.32
Nuclear Power Plants^	Nuclear power plants should be abolished in the future.	3.60	1.63
Senkaku^	To tackle the issue about Senkaku Islands between Japan and China, we should seek a solution by discussion rather than an eye for an eye attitude.	3.74	1.74
Social Welfare^	We should pursue a society with less wealth inequality by improving social welfare.	3.19	1.32
Welfare for SK^	We should improve welfare for South Korean in Japan.	5.18	1.45

Note. ^indicates reverse-coded items, and *M* and *SD* represent the mean and standard deviation in this study, respectively.

[a]In this questionnaire, we would like to note that we use Takeshima, Senkaku islands, and Northern territories instead of Liancourt, Diaoyu/Tiaoyutai islands, and Southern Kuril Islands, respectively, because participants were Japanese and familiar with the Japanese terms.

Results

We used Python 3.11.6 for the analyses, and PyMC 5.9.0 for Bayesian estimations using noninformative prior distributions. We prepared the analysis code on OSF (Takahashi et al., 2025S-a). First, using the original data from Mifune and Yokota (2018), we exploratorily estimated the posterior distributions of means and *Cohen's* d_s of conservative political attitudes, the resulting distributions were shown in Figure 1, and the statistics are shown in Table S2 in the Supplementary Materials (see Takahashi et al., 2025S-b). Based on the criteria by Kass and Raftery (1995), the presence of the differences for five conservative political attitudes (Liancourt: $BF_{10} = 2.33$; Senkaku: $BF_{10} = 0.73$; Abolition of Nuclear Power Plants: $BF_{10} = 1.09$; and Social Welfare: $BF_{10} = 0.78$) was inconclusive. In the case of the Death Penalty, there was no change compared to a decade ago, as indicated by a BF_{01} of 10.0. Yet, for the other domains, we found evidence that conservative political attitudes changed towards conservative compared to the sample of the original study. In addition, SDO was lower ($BF_{10} > 150$).

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5) Those who answered 'I don't know' were considered as intermediate conservatism and converted to '5' for the analysis. This result did not change when those who answered 'don't know' were excluded from the analysis.

Figure 1

Posterior Distribution of Various Conservative Political Attitudes
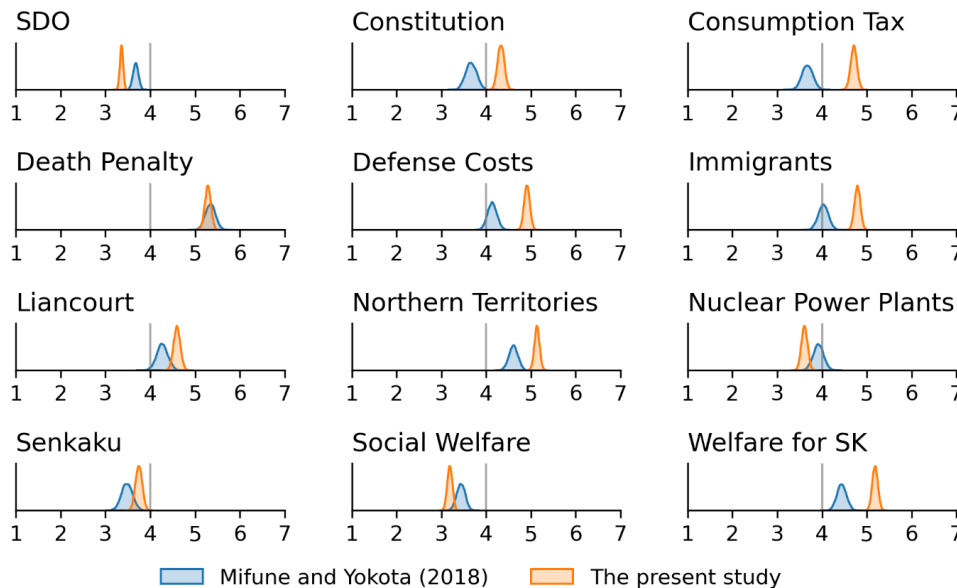
Note. We have conservative political attitudes on the x axis such that lower and higher scores indicate politically liberal and conservative attitudes, respectively. Center gray solid line indicates the middle point of the each measure (i.e., x = 4). As such, means of Constitution, Consumption Tax Hike, Defense Costs, Immigrants, Northern Territories, and Welfare for SK differ from Mifune and Yokota (2018) (see also Table S2 for each statistics).

Next, we examined correlations between SDO and conservative political attitudes and tested the replicability of the findings by Mifune and Yokota (2018), using LeBel et al.'s (2019) criteria. Each correlation was estimated in a Bayesian multivariate-normal model implemented in PyMC. Specifically, regarding the prior distribution for the correlation coefficient (ρ), we incorporated the findings from Mifune and Yokota (2018). The prior was specified as a truncated normal distribution centered at the correlation coefficient reported in Mifune and Yokota (2018), with a standard deviation (σ) of 0.1, bounded between -1 and 1. This approach explicitly utilizes the results of the previous study as prior information within our Bayesian framework.

The results are shown in Table 2 and Figure 2. We estimated the 95% CIs and BFs of correlation between SDO and conservative political attitudes through Bayesian estimation. For six out of the 11 correlations (Senkaku, Welfare for SK, Constitution, Liancourt, Decreasing Defense Costs, and Accepting Immigrants), the 95% CIs did not cross 0 and encompassed the original effect sizes. Those for Consumption Tax Hike and Northern Territories included 0 as well as the original effect. Therefore, we successfully replicated the original correlations reported in Mifune and Yokota (2018). Yet, for Abolition of Nuclear Power Plants, and Social Welfare, the 95% CIs did not include the original effect sizes, but the replication effect sizes were larger than the original ones. Lastly, regarding the Death Penalty, the replication was unsuccessful, as the 95% CI did not include the original effect size. Notably, in support of Mifune and Yokota (2018), we found substantial evidence that there were no correlations between SDO and Consumption Tax Hike/Northern Territories based on Kass and Raftery's (1995) criteria (BF_{10} = 6.67 and 9.09, respectively[6]).

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6) BF_{01} is defined as the inverse of BF_{10} (i.e., BF_{01} = 1 / BF_{10}). Therefore, when BF_{01} exceeds 1/3, it indicates *positive* support for the null hypothesis. Given the criterion, Consumption Tax Hike (BF_{01} = 1/0.15 = 6.67) and Northern Territories (BF_{01} = 1/0.11 = 9.09) showed no evidence of a correlation with SDO.

Table 2

Correlations Between SDO and Conservative Political Attitudes as Reported by Mifune and Yokota (2018) in Study 2 and Those of the Current Study

Political Attitudes	Original		Mdn	95% CI		BF₁₀	Evidence
	r	*p*		*LL*	*UL*		
Constitution*	**.18**	.01	**.24**	.17	.31	BF > 150	very strong
Consumption Tax*	⁻.06	.38	⁻.05	⁻.13	.03	0.15	positive (for H0)
Death Penalty	.09	.21	**.25**	.17	.32	BF > 150	very strong
Defense Costs*	**.25**	< .001	**.23**	.16	.30	BF > 150	very strong
Immigrants*	**.21**	< .001	**.18**	.11	.26	BF > 150	very strong
Liancourt*	**.25**	< .001	**.22**	.14	.29	BF > 150	very strong
Northern Territories*	⁻.06	.50	⁻.01	⁻.08	.07	0.11	positive (for H0)
Nuclear Power Plants*	**.22**	< .001	**.37**	.30	.44	BF > 150	very strong
Senkaku*	**.29**	< .001	**.26**	.19	.33	BF > 150	very strong
Social Welfare*	**.35**	< .001	**.50**	.44	.56	BF > 150	very strong
Welfare for SK*	**.22**	< .001	**.24**	.17	.32	BF > 150	very strong

Note. Column names "Original" presented Mifune and Yokota's (2018) results in Study 2, "Median" and "95% CI" are median and 95% credible interval of posterior distribution of correlation coefficient (*LL* = lower limit; *UL* = upper limit), "BF₁₀" is bayes factor and "Evidence" showed strength of evidence based on criteria of Kass and Raftery (1995) (BF < 3: inconclusive; BF > 3: positive; BF > 20: strong; BF > 150: very strong). For example, BF₁₀ = 3.2 means that the data are 3.2 times more likely under the alternative hypothesis (correlation) than under the null hypothesis (non-correlation). BF = 3.2 (BF₁₀ = 3.2 or BF₀₁ = 0.31) is interpreted as "positive" evidence for the hypothesis (alternative or null hypothesis). *indicates items that were replicated successfully and bold coefficients that the 95% CI did not cross 0.
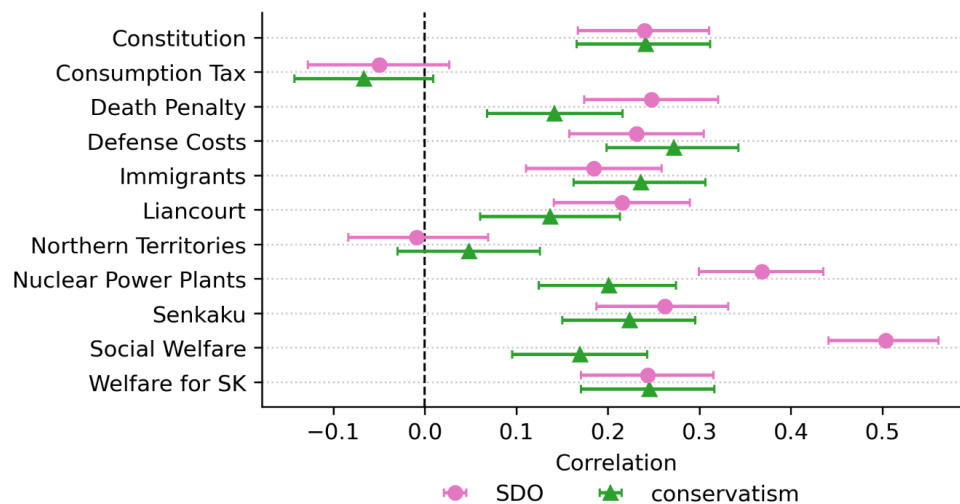
Figure 2

95% CI and Original Effect Size
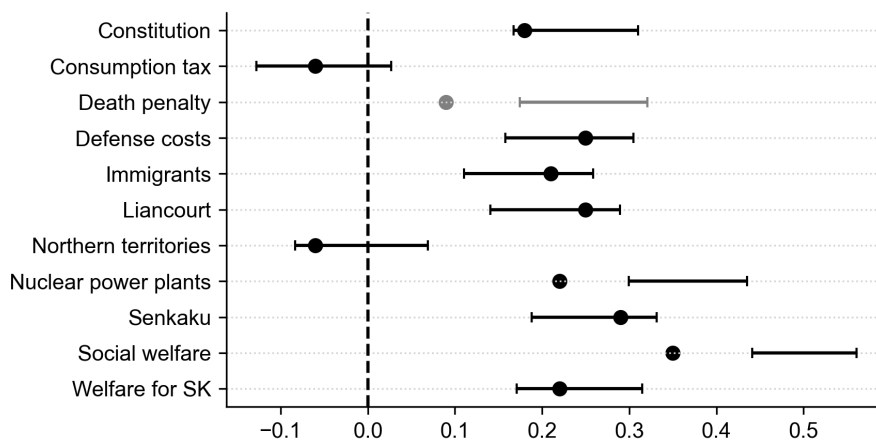
Note. The dots in Figure 2 represent the original effect sizes in Mifune and Yokota (2018). The black intervals represent the 95% credible intervals (CIs) replicating the results of the original study, and the gray intervals represent 95% CI that we could not replicate. We successfully replicated the original correlations for several topics (Senkaku, Welfare for South Korea, Constitution, Liancourt Rocks, Defense Costs, Immigrants, Northern Territories, and Consumption Tax) as the replication CIs included the original effect size. The intervals for some categories (Social Welfare and Nuclear Power Plants) do not contain the black dots but show effect sizes in the same direction as the original study, suggesting these are also successful replications with different strengths of the associations. However, for the Death Penalty, despite the direction of the effect size aligning with the original study, the absence of the original effect size within the CI leads to the conclusion of an unsuccessful replication.

We then examined whether and how SDO and conservatism were differently associated with the political attitudes. The estimated correlation between SDO and self-reported conservatism was Median = .14 (95% CI [.04, .22]), and BF₁₀ = 8.22, suggesting substantial evidence for a positive correlation. Figure 3 illustrates these relationships, showing the 95% CIs of the correlation coefficients between SDO/conservatism and each political attitude. While the correlations between SDO

and most conservative political attitudes were similar to those with conservatism, there were some notable differences; for instance, SDO was more strongly correlated with the attitudes about Social Welfare than conservatism was. The comprehensive details of our analysis, including the table of a mini meta-analysis combining our current data and original study's data in Table S3, and aggregated attitudes in Table S4, are available in the Supplementary Materials (see Takahashi et al., 2025S-b). Furthermore, we implemented partial correlation analysis, and found that SDO was significantly correlated with conservative political attitudes, even after controlling for conservatism (Table 3).

Figure 3

Correlation Coefficients and 95% CI Between Conservatism/SDO and Political Attitudes

Note. Figure 3 illustrates the correlation coefficients (represented by circles or triangles) and the 95% credible intervals (CIs, represented by bars) between conservatism/SDO and various conservative political attitudes. The pink circular dots and bars denote the correlations between SDO and political attitudes, while the green triangle dots and bars indicate the correlations between conservatism and political attitudes.

Table 3

Correlations With Social Dominance Orientation, and Partial Correlations Controlling for Conservatism

	r			$r_{partial}$		
		95% CI			95% CI	
Political Attitudes	Coefficient	UL	LL	Coefficient	UL	LL
Constitution	**.24**	.17	.31	**.23**	.25	.31
Consumption Tax	−.05	−.13	.03	−.03	−.12	.06
Death Penalty	**.25**	.17	.32	**.28**	.20	.36
Defense Costs	**.23**	.16	.30	**.20**	.11	.28
Immigrants	**.18**	.11	.26	**.18**	.09	.26
Liancourt	**.22**	.14	.29	**.22**	.13	.31
Northern Territories	−.01	−.08	.07	−.01	−.10	.09
Nuclear Power Plants	**.37**	.30	.44	**.38**	.30	.45
Senkaku	**.26**	.19	.33	**.27**	.18	.35
Social Welfare	**.50**	.44	.56	**.53**	.46	.59
Welfare for SK	**.24**	.17	.32	**.28**	.17	.35

Note. Column names "*r*" represents correlations between SDO and conservative political attitudes, while "$r_{partial}$" indicates the partial correlations between them controlling for conservatism. Each cell shows median and 95% credible interval (CI) of posterior distribution of the correlations and partial correlation coefficients. Bold coefficient indicates that 95% CI does not cross 0.

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Discussion

We aimed to replicate the correlation between SDO and conservative political attitudes (Mifune & Yokota, 2018). We successfully replicated Mifune and Yokota (2018) for 10 out of 11 political attitudes. We did not replicate the non-significant correlation between attitudes towards Death Penalty and SDO; we rather found a positive correlation between them in the present study.

We found positive correlations between SDO and conservative political attitudes in nine out of eleven issues. These results align with SDT's core prediction that SDO correlates specifically with attitudes perceived as relevant to establishing or maintaining intergroup hierarchies (Sidanius & Pratto, 1999). The results for eight of these nine issues directly replicated the pattern observed by Mifune and Yokota (2018), reinforcing the theoretical expectation outlined in our introduction: SDO predicts stances on political issues when those issues are framed in terms of group dominance or inequality. For instance, the observed correlations for the Senkaku and Liancourt disputes support the interpretation that these are viewed as intergroup position issues involving international hierarchy, while those for Social Welfare and Immigrants suggest they are perceived as concerning hierarchy maintenance within Japan, consistent with the hierarchy-enhancing or -attenuating functions discussed by SDT.

In addition, replicating Mifune and Yokota (2018), we found no significant correlation between SDO and attitudes towards the Northern Territories and the Consumption Tax Hike. As anticipated by SDT, a correlation is not expected if an issue is not primarily interpreted as the enhancement of intergroup hierarchy. The absence of correlation for these two issues thus suggests they may not be strongly perceived in this manner by our participants. In fact, Annaka et al. (2022) pointed out that people can interpret the consumption-tax hike as both hierarchy-enhancing and hierarchy-attenuating; on the one hand, the tax is regressive, placing a heavier burden on low-income earners. On the other hand, the revenue is earmarked for universal welfare. Consequently, support for a higher consumption tax could align with either a desire to compress or to widen social stratification. Indeed, recent work reports no clear relationship between liberal-conservative ideology and one's preferred consumption-tax level (Annaka et al., 2022).

The Northern Territories issue is a territorial issue, and, theoretically, the attitude towards this issue should be associated with SDO, similarly to those towards the Senkaku Islands and Takeshima issues. Nevertheless, our study and Mifune and Yokota (2018) consistently did not find such an association. We conjecture that those results may simply be due to the measurement item. Specifically, as Mifune and Yokota (2018) pointed out, there are two mixed meanings in the question on the Northern Territories issue. The question read, "To tackle the issue with Northern Territories, we should actively do something such as filing a complaint against Russia to the International Court of Justice." The first part of the question taps on the attitudes towards active measures against Russia and this should be theoretically, positively associated with SDO (Pratto et al., 2000). Contrastingly, the second half of the question, "filing a complaint against Russia to the International Court of Justice, could be interpreted as tapping their willingness to surrender national autonomy and submit to a higher authority. Such an interpretation leads to a negative association between SDO and the response to this question. Taken together, the question item might have conflated the two opposing attitudes and thus led to the null correlation. While it is important to contextualize question items to obtain practical and culture-specific insights, it is sensible to carefully construct questions, and the correlation between the attitude towards the issue surrounding Northern Territories warrants further examination. However, moving beyond simply noting these absences, a deeper investigation is required to empirically verify why these specific issues are not strongly linked to SDO in the Japanese context, thereby refining our understanding of how SDT's principles apply across different political domains.

We found a positive correlation between SDO and the Death Penalty, which is inconsistent with the original study. Mifune and Yokota (2018) used student samples and found a nonsignificant association. In contrast, the present study and that of Mukai and Matsuki (2022) include substantial data from older, non-student populations and found evidence for the association. The Cabinet Office of Japan (2019, Nov) suggested that elder Japanese individuals tend to hold a consistent attitude towards the death penalty, whereas younger ones have a more flexible view on the issue. In other words, elder individuals have a firmer stance on the topic than their younger counterparts. This may explain the weak, nonsignificant association reported by Mifune and Yokota (2018). This being said, we currently lack a plausible

explanation for the discrepancy between those studies and it is sensible to examine the developmental trajectory of political attitudes and its relationship with SDO.

We would like to highlight that our study offered valuable evidence as to how SDO and the relationship between SDO and conservative political attitudes have not changed in the past ten years, whereas political attitudes have dramatically changed. Previous research has shown that the majority of individuals do not hold ideologically consistent political beliefs (Kalmoe, 2020). For example, studies using American National Election Studies data have indicated that policy attitudes tend to be less linked to ideological dimensions in less politically sophisticated people, and consequently ideology may have less influence on voting choices than in more sophisticated people (Hare, 2022). Thus, while political conservatism may be unstable, the finding that SDO consistently correlates with various political attitudes aligns with the findings of Inamasu et al. (2023). Considering the instability and weak predictive power of political ideology itself, the fact that the relationship between SDO and political attitudes has remained relatively stable over the past ten years is notable. This suggests that the relationship is robust and generalizable, as it holds across different samples, generations, and times. Our study contributes to the literature by showing the robustness of SDO as a predictor of political attitudes among the Japanese.

The results of the current study extends Mifune and Yokota (2018) by demonstrating that SDO is related to political attitudes controlling for conservatism in Japan. Some previous studies have shown that conservatism correlates with not only political attitudes but also SDO (e.g., Pratto et al., 1994), and SDO correlates with political attitudes even when conservatism is controlled (Pratto et al., 1994, 2000). In the current study, SDO was found to be positively correlated with various political attitudes, and these correlation coefficients remained largely unchanged after controlling for conservatism. These findings are consistent with the predictions of social dominance theory (Sidanius & Pratto, 1999).

One important limitation of our study is that our measurements of conservative political attitudes were very specific, and the set of political attitudes may not capture all key political issues in Japan. Thus, it is sensible to prepare a comprehensive set of political attitudes, especially in collaboration with scholars in political science, and conduct studies so that we can generate a theory explaining the strength of the relationship between SDO and political attitudes. We hope that our correlational evidence will be part of the basis to formulate a theory that can systematically account for the relationship between SDO and different types of political attitudes.

Supplementary Materials

The Supplementary Materials contain the following items:

- Research data, analysis code, codebook, and questionnaires (Takahashi et al., 2025S-a)
- Supplementary tables and figures (Takahashi et al., 2025S-b)
    - Table S1: Means, standard deviations, and correlations with confidence intervals with SDO-D, SDO-E, and political attitudes in present study
    - Table S2: Cohen's *d* for each item compared with Mifune and Yokota (2018)
    - Table S3: Mini-meta analysis with the present study and Mifune and Yokota (2018)
    - Table S4: Means, standard deviations, and correlations with confidence intervals with SDO, conservativeness, SDO-D, SDO-E, and aggregated political attitudes in present study
    - Figure S1: Correlation coefficients and 95% CIs of SDO-D and SDO-E

Index of Supplementary Materials

Takahashi, R., Imada, H., & Mifune, N. (2025S-a). *SDO, political attitudes, political apologies, and expectations of sincerity* [Research data, analysis code, codebook, and questionnaires]. OSF. https://osf.io/snruy/

Takahashi, R., Imada, H., & Mifune, N. (2025S-b). *Supplementary materials to "Cross-temporal replication of the relationship between SDO and conservative political attitudes in Japan: SDO and attitudes shifted but the relationship holds"* [Supplementary tables and figures]. PsychOpen GOLD. https://doi.org/10.23668/psycharchives.21214

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