Political Persuasion in the Information Age: Results from a Field Experiment

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Discussion

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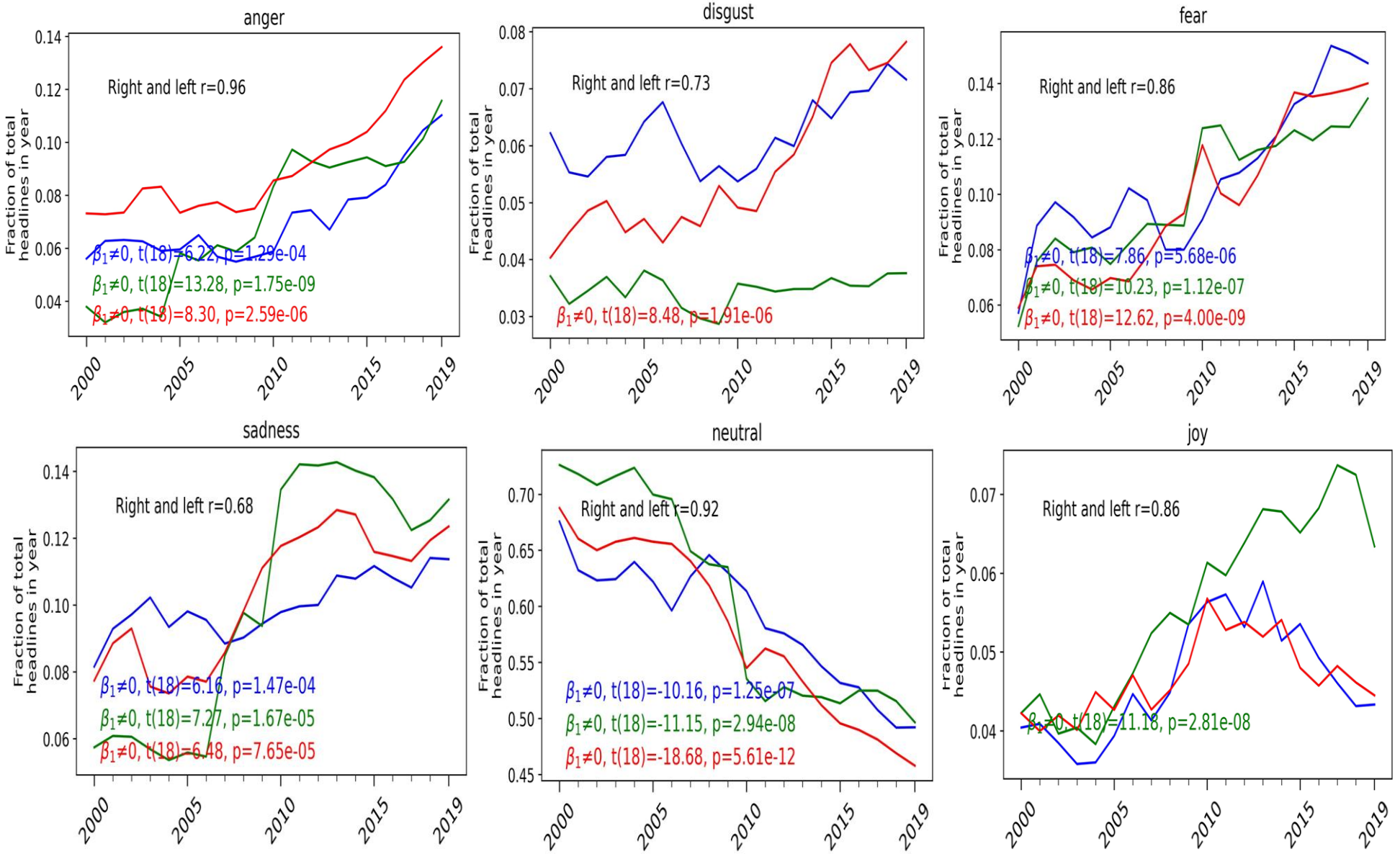
Emotional Word Use by Left, Right & Center Media

Rozado, D., Hughes, R., & Halberstadt, J. (2022). Longitudinal analysis of sentiment and emotion in news media headlines using automated labelling with Transformer language models. PLOS ONE, 17(10), e0276367.



Hyped-up emotion as political marketing everywhere, not just China

Main Findings

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- ❑ **Clips classified as either *nationalist* or *critical* & either *calm* or *emotional tone***

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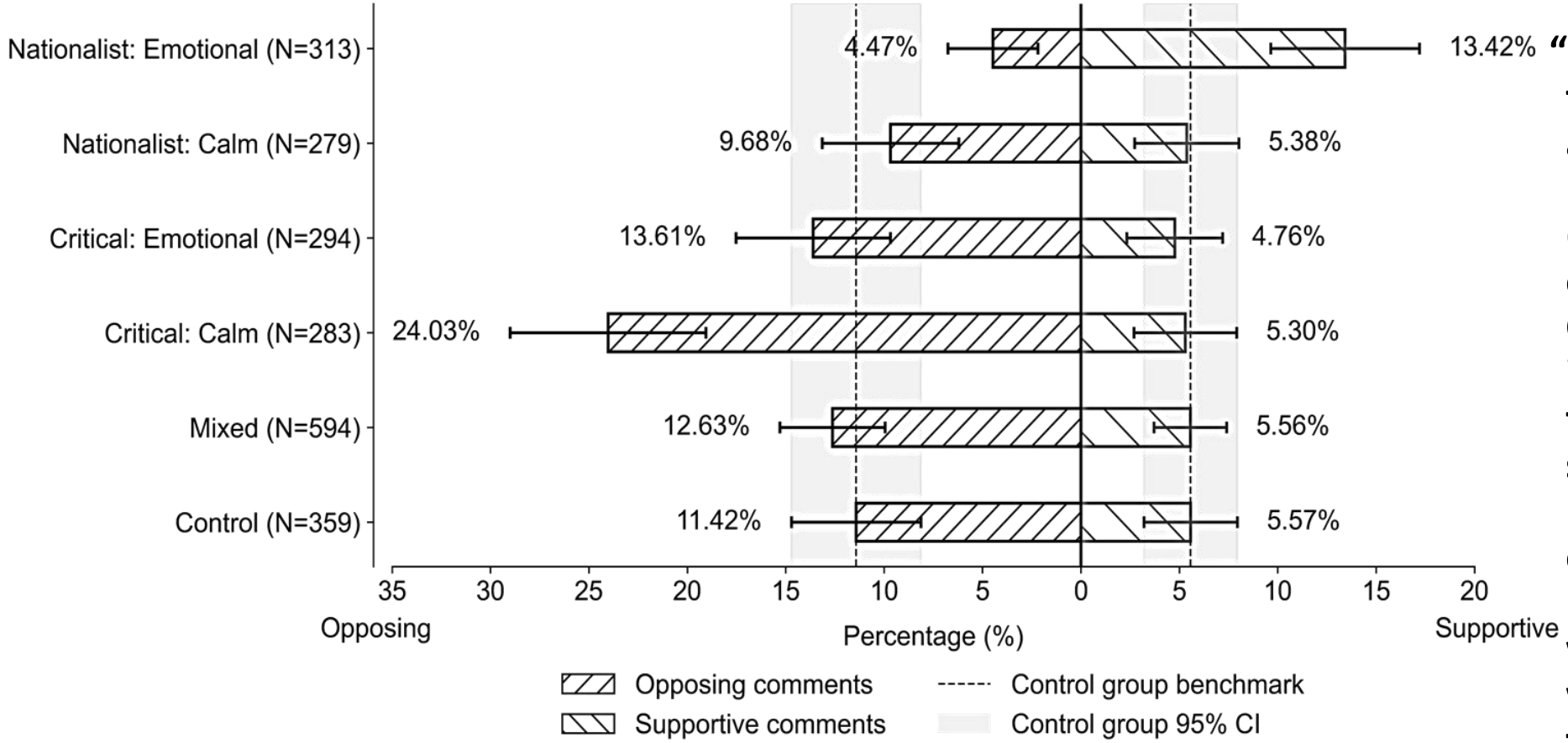
- ❑ **Treatment group watched video then did survey, placebo group just did survey & relative to placebos**



"While in English translation, the question is quite ambiguous about whether it is positive or negative, "opinion" (意见) tends to reflect oppositional views in Chinese. Consistent with this interpretation, responses to this question were very strongly correlated with ultimately providing oppositional feedback on the law (ρ = 0.27), while responses were completely uncorrelated with providing supportive feedback." (p. 11)

Issue 1: 您对此新增条例有无修改意见?

Political Persuasion in the Information Age ➔ Ask AI for grammar parsing

- 您 (nín) → polite "you"
- 对此 (duì cǐ) → "regarding this" / "with respect to this"
- 新增条例 (xīn zēng tiáo lì) → "newly added regulation/ordinance/rule" (formal, legal or official wording)
- 有无 (yǒu wú) → "whether or not there is" (polite, formal way to ask a yes/no question)
- 修改意见 (xiū gǎi yì jiàn) → "modification opinions" = suggested changes, revisions, or comments

Connotation: Neutral to polite/constructive, no critical or negative connotation

- In formal Chinese (esp. government documents, company policy, or legal drafts), "有无修改意见" is standard, professional language for public consultation or soliciting feedback. It is an open invitation for suggestions — exactly like "Any comments or proposed changes?" in English.
- The phrase "修改意见" is milder and more collaborative than just "意见". It specifically means "opinions on how to improve/modify it," which sounds helpful rather than complaining.
- Compare: Negative/critical version: "您对此有意见吗？" (sounds like "Do you have a problem with this?")
- This version: "您对此新增条例有无修改意见？" → polite & constructive ("We'd like your input on improvements.")
- Bottom line: This is courteous, bureaucratic-style language asking for feedback in a non-confrontational way. No hidden criticism at all — it's the opposite: it assumes the recipient might have useful suggestions and is welcoming them.

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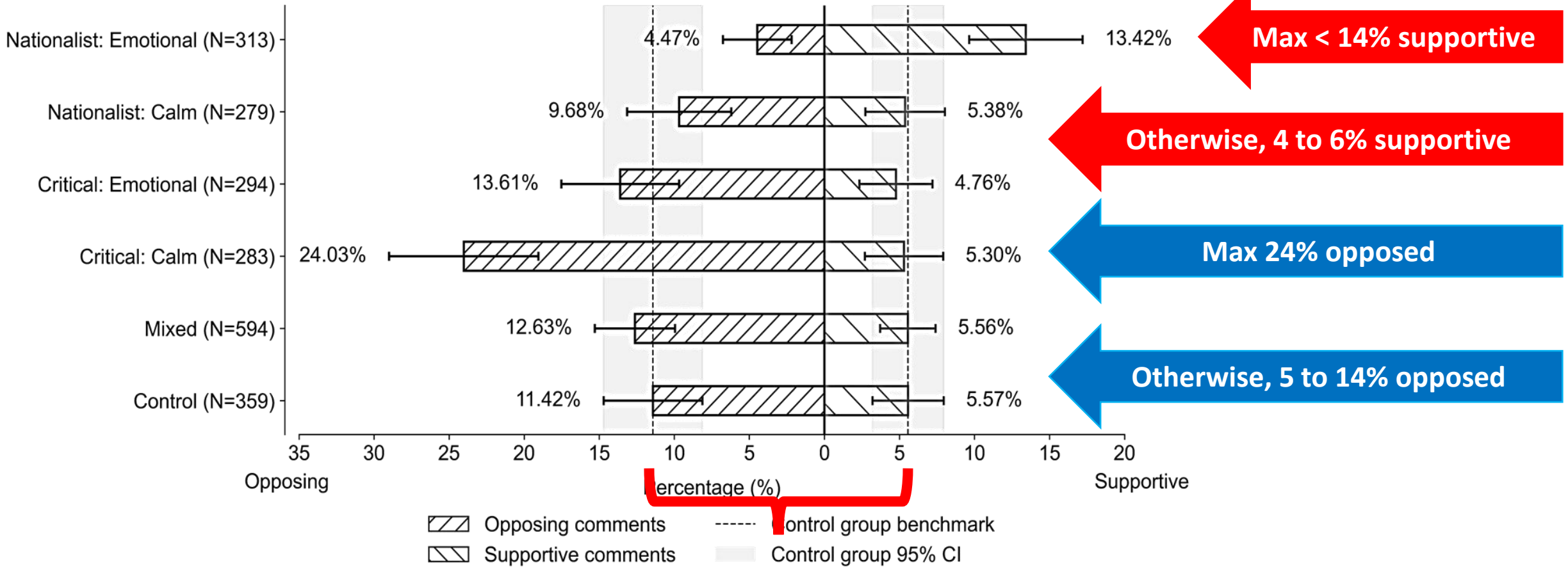

Max < 14% supportive

Otherwise, 4 to 6% supportive

Max 24% opposed

Otherwise, 5 to 14% opposed

A degree of shyness?

Explanations of Apparent Shyness

1. Chinese people really are shy?

Paulhus DL, Duncan JH, Yik MSM. 2002. Patterns of shyness in East-Asian and European-heritage students. J Res Pers. 36(1):42-62.

- ❑ East Asian-heritage university students self-reported substantially higher rates of shyness than European-heritage students.

Chen X, Hastings PD, Rubin KH, Chen H, Cen G, Stewart SL. 1998. Child-rearing attitudes and behavioral inhibition in Chinese and Canadian toddlers: a cross-cultural study. Dev Psychol. 34(4):677-86.

- ❑ Chinese toddlers displayed significantly higher behavioral inhibition (a core precursor to shyness) than Canadian toddlers.

Jones V, Wang Z, Yuan S, Pham C, Putnam SP, Gartstein MA. 2021. Cross-cultural differences in temperament between the United States and the People's Republic of China: a longitudinal comparison. Asian J Psychol Res. 7(3):31-41.

- ❑ Chinese children scored significantly higher than U.S. children on parent-reported shyness, fear, discomfort, and related negative affectivity.

Kong X, MacGowan TL, Wang S, Li Y, Schmidt LA. 2024. Observed shyness-related behavioral responses to a self-presentation speech task: a study comparing Chinese and Canadian children. Behav Sci (Basel). 14(12):1147.

- ❑ Chinese children exhibited more observed shy behaviors (greater gaze aversion and less speaking time) than Canadian children during a structured speech task.

2. Self-censorship?

Braghieri L. 2024. Political correctness, social image, and information transmission. AER 114(12):3877-3904.

- ❑ Conscious: US college students' concerns re. political correctness norms cause substantial divergence between privately held anti-PC views and publicly expressed opinions.

Lynn CD, Pipitone RN, Keenan JP. 2014. To thine own self be false: self-deceptive enhancement and sexual awareness influences on mating success. Evol Behav Sci. 2014;8(2):109-22

- ❑ Unconscious: The most convincing lie is the lie the liar earnestly believes is true

Trivers R. 2011. The folly of fools: the logic of deceit and self-deception in human life. New York: Basic Books

- ❑ Applied to (rightwing) politics

Not Observerd
(sample = Chinese Coauthors)

List Method for Eliciting non-PC Views

Kuklinski JH, Cobb MD, Gilens M. 1997. Racial attitudes and the “new South”. J Polit. 59(2):323-49

❑ Racism in the US

Gonzalez-Ocantos E, de Jonge CK, Meléndez C, Osorio J, Nickerson DW. 2012. Vote buying and social desirability bias: Experimental evidence from Nicaragua. Am J Polit Sci. 56(1)

❑ Corruption in Nicaragua

Lyall J, Blair G, Imai K. Explaining support for combatants during wartime: A survey experiment in Afghanistan. Am Polit Sci Rev. 2013;107(4):679-705

❑ Support for armed fighters

Robinson D, Tannenberg M. Self-censorship of regime support in authoritarian states: Evidence from list experiments in China. Res Politics. 2019;6(3)

❑ CPC popularity

Bratton M, Dulani B, Masunungure E. Detecting manipulation in authoritarian elections: Survey-based methods in Zimbabwe. Elect Stud.

Corruption in Zimbabwe

❑ Corruption in Zimbabwe

Literature reviews

Blair G, Coppock A, Moor M. 2020. When to worry about sensitivity bias: a social reference theory and evidence from 30 years of list experiments. Am Polit Sci Rev. 2020;114(4):1297-1315.

Li J, Van den Noortgate W. 2022. A meta-analysis of the relative effectiveness of the item count technique compared to direct questioning. Sociol Methods Res. 2022;51(2):760-799.

Hinsley A, Nuno A, et al. 2019. Asking sensitive questions using the unmatched count technique: applications and guidelines for conservation. Methods Ecol Evol. 2019;10(3):308-319.

Political Persuasion in the Information Age

Miller JD. 1984. A new survey technique for studying deviant behavior. George Washington University dissertation.

How to measure nonPC opinions without directly asking nonPC questions?

List methodology

Ask control group "How many of the following 3 propositions do you agree with?"

1. Russia's space program is mostly badly run (intentionally latent) % agree = f_1
2. The Russian orthodox church is mostly badly run (intentionally latent) % agree = f_2
3. Russian big businesses are mostly badly run (intentionally latent) % agree = f_3

Control group mean response $\mu_C = f_1 + f_2 + f_3 \in [0, 3] \subset \mathbb{R}$

Ask control group "How many of the following 4 propositions do you agree with?"

1. Russia's space program is mostly badly run (intentionally latent) % agree = f_1
2. The Russian orthodox church is mostly badly run (intentionally latent) % agree = f_2
3. Russian big businesses are mostly badly run (intentionally latent) % agree = f_3
4. Russia's government is mostly badly run (intentionally latent) % agree = f_4

Treatment group mean response $\mu_T = f_1 + f_2 + f_3 + f_4 \in [0, 4] \subset \mathbb{R}$

The difference in means gives the answer to the nonPC question 4

$f_4 = \mu_T - \mu_C =$ **fraction who agree "Russia's government is mostly badly run"**

↑ $f_4 > 0$ **by more ➔ more unvoiced dissent**

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How to measure nonPC opinions without directly asking nonPC questions?

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Ask control group "How many of the following 3 propositions do you agree with?"

1. Russian is a pleasant-sounding language (intentionally latent) % agree = f_1
2. The Russian economy is prospering (intentionally latent) % agree = f_2
3. Russian business are well-governed (intentionally latent) % agree = f_3

Control group mean response $\mu_C = f_1 + f_2 + f_3 \in [0, 3] \subset \mathbb{R}$

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3. Russian business are well-governed (intentionally latent) % agree = f_3
4. Russia's leader is a great man (intentionally latent) % agree = f_4

Treatment group mean response $\mu_T = f_1 + f_2 + f_3 + f_4 \in [0, 4] \subset \mathbb{R}$

The difference in means gives the answer to the nonPC question 4

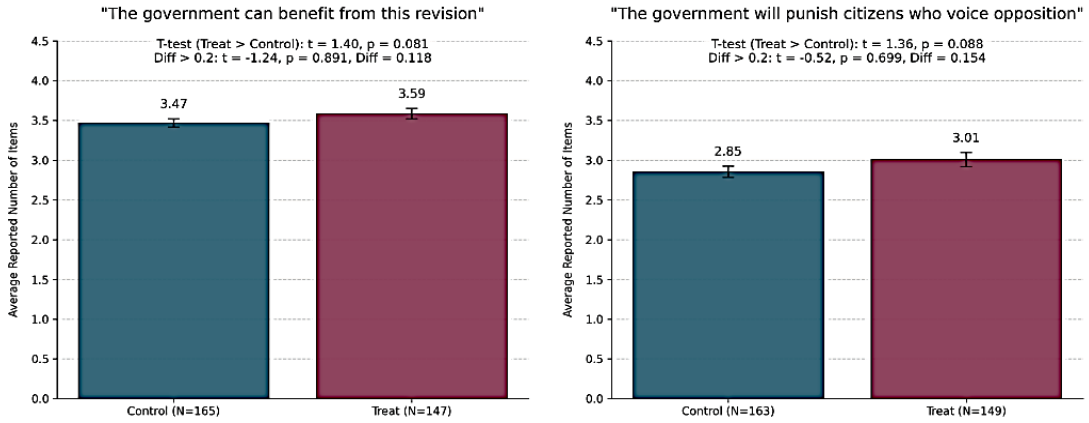
$f_4 = \mu_T - \mu_C = 0 =$ fraction of people who agree "Russia's leader is a great man"

$\uparrow f_4 = 0 \rightarrow$ people who agree that "Russia's leader is a great man" ≈ 0%

List Test in Appendix Could Be Developed

- Treatment & control group list insignificantly different number of agreements
- "Overall, the results of this follow-up survey suggest that worries about government retribution were unlikely to be a first order concern in governing participants' decisions (and even less likely that it would have a large differential effect on those who saw particular videos).

FIGURE A3: LIST EXPERIMENT RESULTS: SENSITIVITY OF POLITICAL EXPRESSION



Notes: This figure shows results from two list experiments. The list experiments measure respondents' latent concerns about expressing political opinions. Results show small differences between the treatment and control groups. At the 5% significance level, we cannot reject the null hypothesis of no significant difference. Using 0.2 as the difference threshold, we can be 95% confident that the true difference does not exceed 0.2.

TABLE A4: CONTENT OF THE TWO LIST EXPERIMENTS

List experiment 1: How many items do you support?		List experiment 2: How many items concern you?	
Control	**Treat**	**Control**	**Treat**
The government should increase investment in education to reduce educational inequality.	The government should increase investment in education to reduce educational inequality.	The leakage of personal privacy on social media is not effectively regulated by the government.	The leakage of personal privacy on social media is not effectively regulated by the government.
Environmental protection is everyone' s responsibility, and enterprises should take the lead.	Environmental protection is everyone' s responsibility, and enterprises should take the lead.	Risks of online scams and phishing websites are prevalent everywhere.	Risks of online scams and phishing websites are prevalent everywhere.
Smoking should be prohibited in all public places.	Smoking should be prohibited in all public places.	The government has installed excessive surveillance cameras in public spaces.	The government has installed excessive surveillance cameras in public spaces.
The government should raise the minimum wage based on regional characteristics.	The government should raise the minimum wage based on regional characteristics.	Credit card information is stolen during online shopping.	Credit card information is stolen during online shopping.
	The government can benefit from this revision		***The government would punish citizens who voice opposing opinions.***

Notes: This table presents the main content of the list experiments. The descriptions in bold are those seen only by the respondents in the treatment group. In each list experiment, respondents were asked to report the number of descriptions they agreed with, without specifying which ones they agreed with. This approach allows for the measurement of respondents' underlying attitudes.

Results

- f_4 = 3.59 – 3.47 = 12% agree that "The government can benefit from this revision" ➔ insignificant <u>patriotism?</u>
- f_4 = 3.01 – 2.85 = 16% agree that "The government would punish citizens who voice opposing opinions"

But what about list DID if 1st re. nationalist/critical ⊗ emotional/calm videos?

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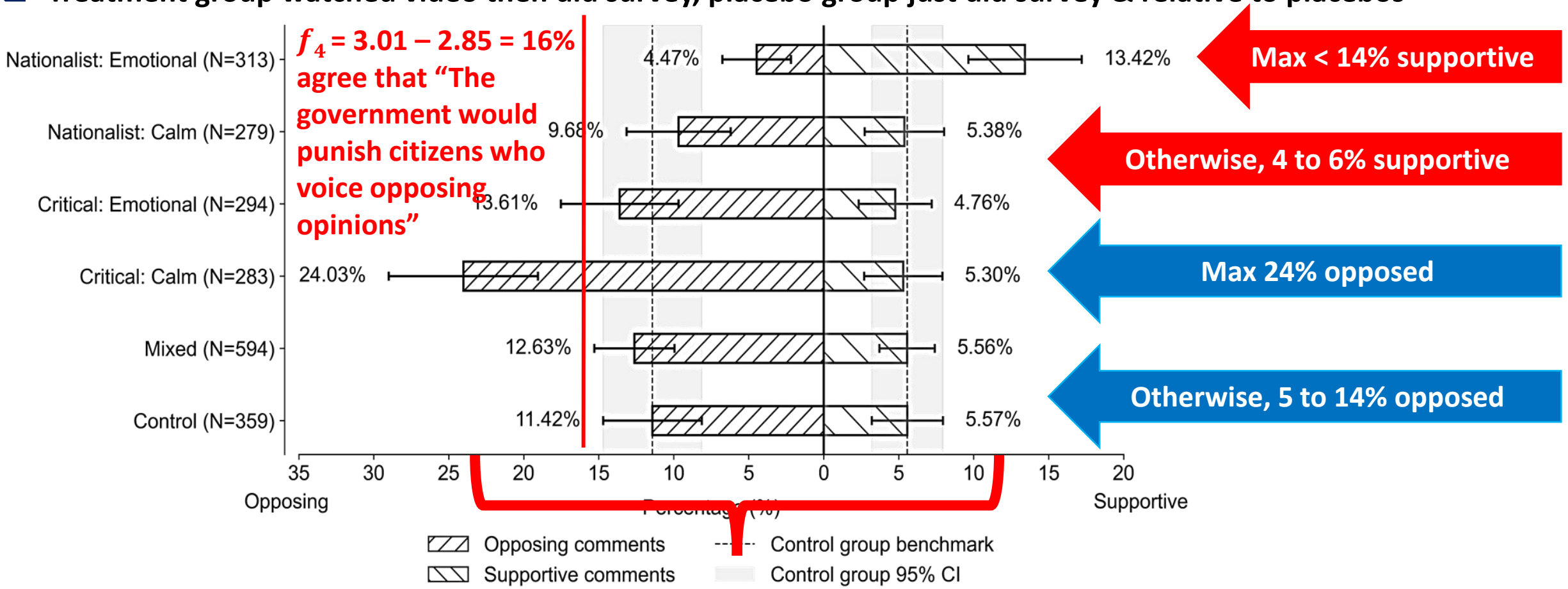


A degree of shyness?

Additional Findings

Inform people (surprisingly?) many people opposed amendment ➔ support falls

TABLE 5: SUPPLEMENTARY EXPERIMENT ON SECOND BELIEFS

	1[Oppose]				1[Support]			
	Sup-Expt	Sup-Expt	Main-Expt	Pooled	Sup-Expt	Sup-Expt	Main-Expt	Pooled
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Nat_Emotional	0.004	-0.012	-0.046**	-0.045**	0.001	-0.004	0.087***	0.084***
	(0.123)	(-0.346)	(-2.043)	(-2.071)	(0.029)	(-0.169)	(3.543)	(3.488)
Informed				0.063**				0.020
				(2.156)				(0.907)
Nat_Emotional × Informed				0.047				-0.087***
				(1.174)				(-2.584)
Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Province FE	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Obs	536	534	591	1,126	536	534	591	1,126
R-squared	0.000	0.061	0.086	0.058	0.000	0.056	0.062	0.035

Notes: This table presents the effects of informing respondents about the actual intolerance levels of others (denoted as *Informed*) on their propensity to express opposing (1[Oppose]) or supportive (1[Support]) opinions regarding the new regulation. In this supplementary experiment, respondents were exclusively exposed to nationalist video interventions. The variable *Nat_Emotional* represents exposure to emotional nationalist videos. *Sup-Expt* refers to participants in the supplementary experiment in which participants viewed nationalist videos (emotional or calm) and were informed about others' true intolerance levels, while *Main-Expt* denotes participants in the main experiment who viewed the nationalist videos. The *Pooled* sample combines nationalist video treatment groups from both experiments. All regression specifications include province fixed effects and control for demographic characteristics including age, gender, education level, income, and prior attention to proposed changes to the Public Security Law. Robust t-statistics are reported in parentheses, *** p<0.01, ** p<0.05, * p<0.10.

"The average score for the 2,212 respondents who previously participated in this survey, for the question "Do you think that people who propose amendments to the new legal provision are unpatriotic?" is 5.14"

Contention

- 5.14 < 5.5 = midpoint in [1,10] with
  1 = "I do not think so at all" &
  10 = "They are very unpatriotic."

Issue: Is 5.14 really surprisingly high? Needs more explanation

- Psychological midpoint of 1 & 10 is 5 (not 5.5?) & 5.14 > 5
- Granting people see 5.5 as the midpoint, 5.14 is not much less than 5.5
- Is ~50% opposing surprisingly high?

Myside Bias

"Finally, we collected basic demographic information, including their hometown, age, gender, education, income, occupation, and attitudes toward money, trust, and cooperation."

- ❑ **Controls listed & then not discussed much in the tests**

Higher IQ people actually <u>less open</u> to changing their minds

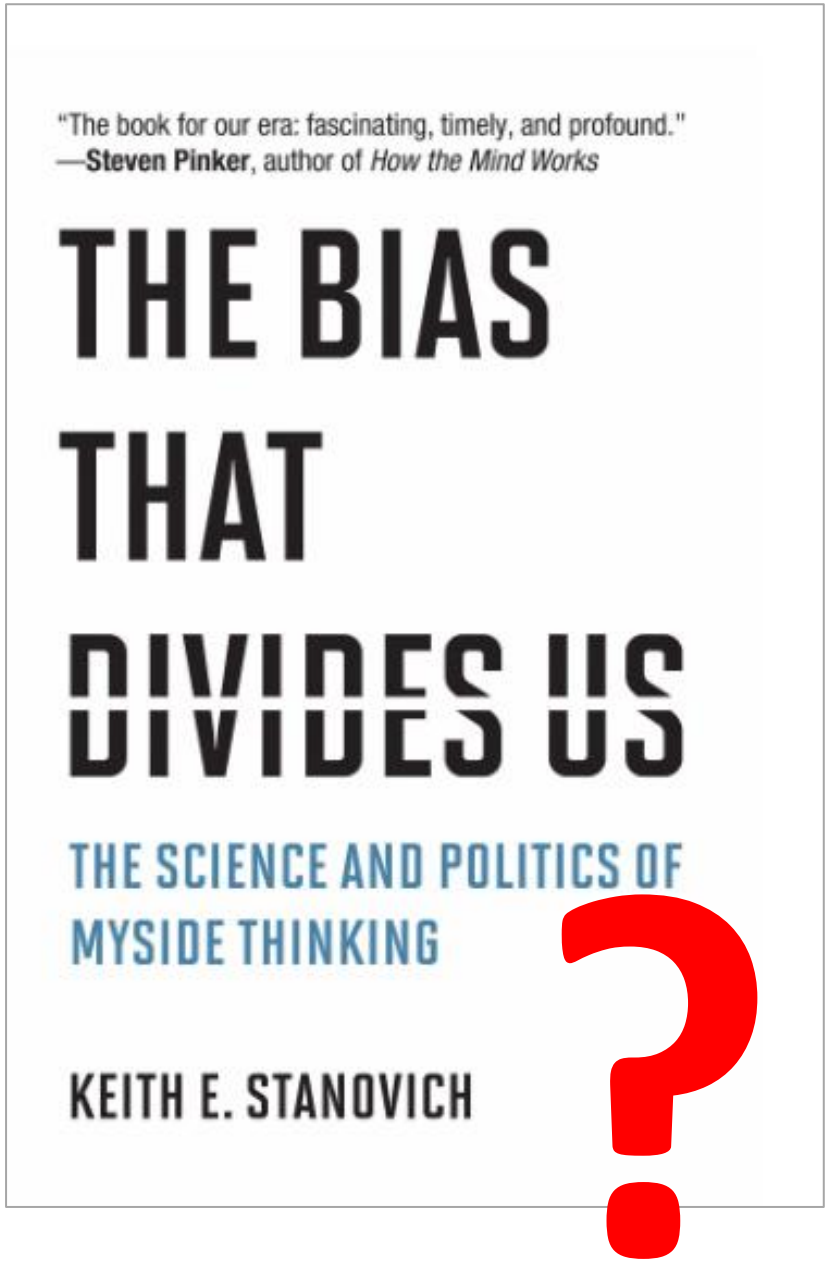
Ditto PH, Liu BS, Clark CJ, Wojcik SP, Chen EE, Grady RH, Celniker JB, Zinger JF. 2019. At Least Bias Is Bipartisan: A Meta-Analytic Comparison of Partisan Bias in Liberals and Conservatives. Perspectives on Psychological Science14(2)273-291

- ❑ **Subjects shown research studies with simple errors**
- ❑ **Leftist subjects found errors in studies with rightist conclusions, <u>not</u> in studies with leftist conclusions**
- ❑ **Rightist subjects found errors in studies with leftist conclusions, <u>not</u> in studies with rightist conclusions**
- ❑ **Effect <u>stronger for higher IQ</u> people (<u>both</u> leftists & rightists)**

Possible explanations

- ❑ **Higher IQ ➔ more confident re. prior (I'm right)**
- ❑ **Higher IQ ➔ better at rationalizing, not necessarily better at rationality**

Maybe DIDs re education?



Background Music in Newscasts & Documentaries

Possible extension: Rate the background music for emotional valence

Proof of concept examples

- ❑ Minor triad (e.g. C-Eb-G), diminished triad(e.g. C-Bb-Gb): Danger, ...
- ❑ Major triad (e.g. C-E-G), dominant 7th (C-E-G-Bb): Enthusiasm

Evolutionary origins of music

Wallin NL, Merker B, Brown S, eds. 2000. The Origins of Music. MIT Press

- ❑ Characteristics of human music and animal vocalizations

Marketing

Deaville J, Tan S-L, Rodman R, eds. 2012. Oxford Handbook of Music and Advertising. Oxford University Press

- ❑ General reference

Ethics

Ziv N, Hoftman M, Geyer M. 2012. Music and moral judgment: The effect of background music on the evaluation of ads promoting unethical behavior. Psychology of Music 40(6):738-60..

- ❑ Background music affects information recall, awareness of unethical message, product acceptance
- ❑ Background music biases moral judgment.

Brown S; Volgsten U. eds. 2005. Music and manipulation: On the social uses and social control of music. Berghahn Books.
Juslin PN, Sloboda JA, eds. 2010. Handbook of Music and Emotion: Theory, Research, Applications. Oxford University Press

- ❑ Music is an emotive manipulator that influences attitude, motivation & behavior at many levels & in many contexts.

Finance

Edmans A, Fernandez-Perez A, Garel A, Indriawan I. Music sentiment and stock returns around the world. J Financ Econ. 2022;145(2):234-54

- ❑ Music sentiment positivity correlates with positive contemporaneous equity market returns and predicts subsequent negative market returns

Long-term Fade

- **Effect doesn't last**

  [fn 6] After 6 months, most respondents had little or no recall of the content of the proposed legal provision (90%) nor the videos they had watched (82%). Furthermore, the effect of the videos was no longer detectable in stated willingness to provide feedback.

- **In real life, emotional manipulation (self-manipulation?) does seem to last**
  - **Further research on persistence of emotional manipulation?**

Keynesian Feedback?

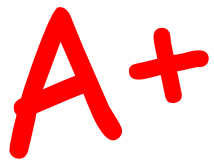
Greater

- ❑ **Self-intolerance**
  - **Do you think that people who propose amendments to the new legal provision are unpatriotic? (1 = disagree strongly … 10 = agree strongly)**
  - ➔ **less apt to oppose & more apt to support**
- ❑ **Social-intolerance**
  - **Do you think that others might see people who propose amendments to the new legal provision as unpatriotic? (1 = disagree strongly … 10 = agree strongly)**
  - ➔ **less apt to oppose & maybe not more apt to support**

TABLE 4: THE IMPACT OF SELF- AND SOCIAL-INTOLERANCE ON WRITING COMMENTS

	1[Oppose]				1[Support]			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Self_Intolerance	-0.023***		-0.014***	-0.013***	0.005**		0.006**	0.006**
	(-8.069)		(-4.341)	(-4.096)	(2.148)		(2.496)	(2.287)
Social_Intolerance		-0.024***	-0.019***	-0.017***		-0.000	-0.003	-0.004**
		(-9.445)	(-6.671)	(-6.246)		(-0.180)	(-1.364)	(-2.010)
Nat_Emotional				-0.040*				0.081***
				(-1.857)				(3.489)
Nat_Calm				-0.018				-0.007
				(-0.764)				(-0.373)
Crit_Emotional				0.009				-0.006
				(0.341)				(-0.350)
Crit_Calm				0.109***				-0.002
				(3.696)				(-0.130)
Mixed				0.013				0.001
				(0.589)				(0.076)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs	2,121	2,121	2,121	2,121	2,121	2,121	2,121	2,121
R-squared	0.078	0.090	0.098	0.113	0.023	0.021	0.024	0.037

Notes: This table presents associations between self- and social-intolerance and respondents' decisions to submit written feedback. 1[Oppose] and 1[Support] indicate whether a respondent submitted opposing or supportive opinions, respectively. After the video interventions, respondents were asked whether they personally view opposition to the new regulation as "unpatriotic" (*Self_Intolerance*), and whether they believe others would hold such a view (*Social_Intolerance*). Columns 4 and 8 include treatment indicators: nationalist (*Nationalist*), critical (*Critical*), and mixed (*Mixed*) videos. Nationalist and critical conditions are further divided into "emotional" (*Nat_Emotional*, *Crit_Emotional*) and "calm" (*Nat_Calm*, *Crit_Calm*) versions. The mixed condition includes emotional versions of both. All regressions control for province fixed effects and demographics (age, gender, education, income, prior policy attention). Robust t-statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.10.



Thank you!