Supplementary Information for The effect of disruptive protests on public opinion

Anonymized copy for peer review

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In this Supplementary Information document, I give an overview of the evidence that was included in, and excluded from, this review. Table 1 shows all of the scientific studies about the effect of disruptive protest on public opinion that were used in this review, the issues and countries they covered, their design and outcome variable types (indicating in what section(s) of the review paper they are cited), along with key numerical results. The table does not include plain reports of descriptive findings by survey firms, or papers on related topics (e.g. the effect of non-disruptive protest) that are cited in the review for context.

These key results are not necessarily the only results in these papers. In some cases, certain experimental conditions were left out because they met this review's definition of violent protest (more on this below). In other cases, some outcomes are left out because they do not map clearly onto the outcomes of interest in this review paper (e.g. identification with environmentalism).

Table 2 notes the studies that were excluded from this review because they only cover protests that involved violence (according to this review's definition), often mixed with non-violent disruptive tactics. It also mentions the experimental conditions that were excluded for this reason (in studies that were otherwise included). Of course, many papers set out to explicitly test the effects of violence. Here, I only mention papers for which the reasons behind the exclusion are not obvious (e.g. could not be understood from the paper's title and abstract alone).

Table 1: Overview of all studies of the effect of disruptive protest on public opinion.

Reference	Type	Issue(s)	Country	Design	Outcome type(s)	Key results
Akehurst 2023	Non-academic experiment	Environment	UK	Experimental	Salience, Concern and policy, Behavior	Exposure to one of five climate disruption videos, compared to a pure control, led to: 3 to 13 pp. more people choosing climate as a top 3 issue; -2 to 4 pp. more people saying they are worried about climate change and -2 to 8 pp. more agreement that "government should be doing more"; 2 to 8 pp. more people supporting net zero policies, but also -11 to 7 pp. more agreeement with anti-climate message; and -2 to 7 pp. more people "willing to take campaign action" for climate.
Badullovich et al. 2024	Peer-reviewed	Environment	US	Experimental	Protester support	The non-violent disruptive tactic seen as most appropriate is a "sit-in at the building of an entity failing to protect climate" (5.27 on scale from 1 to 7). Still significantly lower than public march/rally (5.76, p<.001). Least appropriate is throwing soup on painting (1.53).
Brehm and Gruhl 2024	Peer-reviewed	Environment	Germany	Longitudinal	Concern and policy	Probability that a respondent is concerned about climate change increases by 0.98 pp. after FFF protests (p = 0.048) and 1.62 after Ende Gelände/XR protests (p=0.008).
Bugden 2020	Peer-reviewed	Environment	US	Experimental	Protester support	Protest with civil disobedience results in 0.33 pt. increase in support compared to pure control (5-pt. scale). Peaceful march leads to 0.54 pt. increase (both p<.001).
Kleer, Teutem, and De Vries 2024	Academic pre-print	Environment and farming	Netherlands	Experimental	Protester support	Compared to a legal protest, a highway blockade caused a 0.07 pt. drop in support if activists were farmers (on a 0-1 scale), and a 0.08 drop if they were climate activists (both p<.05). Across tactics, climate activists receive ca. 0.12 pt. less support than farmers.
Fabel et al. 2025	Peer-reviewed	Environment	Germany	Diff-in-diff	Behavior	A one-standard-deviation increase in FFF protest activity in a county raises the Green party vote share in the next election by 0.76 pp. (p<.01).
Feinberg, Willer, and Kovacheff 2020	Peer-reviewed	Mixed	US	Experimental	Protester support, Concern and policy	Across four studies, respondents became less supportive of protesters (by 0.59-0.85 on 5-pt. scale, all p<.001) if they used non-violent disruptive tactics rather than conventional tactics. They also become less willing to "support the protesters' cause" (by 0.29-0.60 on 5-pt. scale, all p<.05).
Foxe, Dolšak, and Prakash 2024	Peer-reviewed	Environment	UK	Experimental	Behavior	In a forced-choice conjoint experiment, disruptive tactics reduce willingness to donate (p<.05). Respondents are 42-44% likely to donate to a hypothetical organization if it uses blockades, event interruptions or museum protests, and 55-56% likely if it uses conventional tactics.
Fuller et al. 2025	Academic pre-print	Environment	France	Experimental	Protester support, Concern and policy, Behavior	Compared to a pure control, there was a moderate decrease in support for a climate protest group if they used an occupation (Cohen's d=0.33) or blockade (0.43), but also if they used a march (.15, all p<.001). Both also caused a very small decrease in support for climate policy (occupation: 0.04, blockade: 0.06), though a peaceful march caused the same decrease (0.05, all p<.05). No effect on intention to take personal climate action.

Reference	Type	Issue(s)	Country	Design	Outcome type(s)	Key results
Gonzatti, Hunger, and Hutter 2023	Academic pre-print	Environment	Germany	Experimental	Protester support, concern and policy	Compared to a pure control, there was a moderate decrease in support for a climate protest group if they used a road blockade (ca. 11 pp.) or art attack (ca. 15 pp., both p<.001). A conventional demonstration increased support. No effect of protest form on support for climate policy.
Haas et al. 2025	Peer-reviewed	Environment	Germany	Experimental	Concern and policy, Behavior	Real-world exposure to an FFF protest participants made significantly higher real donations to FFF (by €4.45, p<.001). No effect on pro-environmental attitudes, FFF newsletter subscriptions or intention to vote Green.
Huff and Kruszewska 2016	Peer-reviewed	Separatism	Poland	Experimental	Protester support	No difference between support for concessions to a separatist movement if using demonstration versus government building occupation.
Joly, Wagner, and Carstens 2025	Peer-reviewed	Environment	Germany	Experimental	Protester support, concern and policy	Support for a protest was lower if it used a road blockade (by 2.1 pt., 11-pt. scale). No effect on support for activists' demands.
Kenward 2024	Academic pre-print	Environment	Sweden	Experimental	Concern and policy, behavior	Exposure to a realistic news article about a guerilla wetland restoration slightly reduced concern about wetlands restoration (p<.05), but an article about a motorway blockade did not affect this attitude. Neither affects opinion about environmental activists. Weak effect of motorway blockade article (p<.1) but not wetland article on willingness to talk to others about climate.
Kenward and Brick 2024 (Exp. results)	Peer-reviewed	Environment	UK	Experimental	Concern and policy, Behavior	Compared to a pure control, participants exposed to content produced by XR themselves become slightly more supportive of disruption (by 0.8 pt. on 7-pt. scale, p<.05) and more dissatisfied with government action (0.4 pt., p<.05). No effect on environmental concern, support for XR's demand of a Citizen's Assembly, or intentions to take collective action. BBC or Daily Mail content has no effect on any outcomes, except a small positive effect of BBC on support for disruption (0.3 pt., p<.05).
Kenward and Brick 2024 (Long. results)	Peer-reviewed	Environment	UK	Longitudinal	Concern and policy, Behavior	Compared to before a ten-day XR protest, afterwards respondents are slightly more supportive of disruption (Cohen's d=0.15, p=.06) and slightly more concerned about the environment (Cohen's d=0.16, p=.01). No difference for dissatisfaction with government action, support for movement's demand of a Citizen's Assembly or intentions to take collective action.
Kountouris and Williams 2023	Peer-reviewed	Environment	UK	Longitudinal	Salience, Concern and policy, Behavior	Compared to before a ten-day XR protest, afterwards more respondents agree that "it is worth trying to combat climate change" (6 pp., p<.01) but fewer are willing to pay more for green products (12 pp., p<.01). No effect on questions related to concern about climate.

Reference	Type	Issue(s)	Country	Design	Outcome type(s)	Key results
Nylund, Thai, and Hornsey 2025	Peer-reviewed	Environment	Australia and UK	Experimental	Protester support, Concern and policy	Across two studies, protest resulted in less support for protesters (0.2-.03 pt. on 5-pt. scale, p=.004-.027) if glue and spray paint were used. In Study 2, those tactics resulted in more climate concern (0.2 pt., p=.005).
Ostarek, Klein, Rogers, et al. 2025	Peer-reviewed	Animal rights	UK	Diff-in-diff	Media coverage, Concern and policy, Behavior	After a disuptive protest at a horse race, Animal Rising rceived hundred of media mentions per day and was invited to 61 TV interviews. Compared to respondents who did not hear about the protest, respondents wo did tended to decrease their concern with animal rights (for each step up on a 4-pt. protest awareness scale, concern decreased by 0.08 pt on a 7-pt. scale). Donations on each of the four days after the protest were several s.d.s above the mean.
Ostarek, Klein, Pomerenke, et al. 2025	NGO report	Environment and animal rights	UK	Longitudinal	Media coverage, Behavior	In weeks with protests, activist groups on average received 58 more donations. A one-unit increase in disruptiveness (5-pt. scale) is associated with 77 additional media mentions of the protest group.
Ostarek et al. 2022	NGO report	Environment	Germany, Sweden and UK	Longitudinal	Behavior	On electoral polls held in the seven days following a disruptive protest, the Green (or most climate-friendly) party received 0.25-0.45 pp. additional intended votes.
Ostarek et al. 2024	Peer-reviewed	Environment	UK	Diff-in-diff	Protester support, Concern and policy	Among respondents who became more aware of disruptive group due to a protest, compared to respondents who did not, support for moderate group increased more (standardized beta=0.09, p=0.008), but there was no difference in trends towards more/less climate policy support.
Özden and Glover 2022	NGO report	Environment	UK	Longitudinal	Protester support, concern and policy, behavior	After several weeks of actions by Just Stop Oil and XR, only 18% of respondents supported the protests. Compared to before, there was no change in support for policies that mirror the demands of Just Stop Oil, nor in opposition to Just Stop Oil. Small positive change in the likelihood of taking collective action (0.1 pt on 7-pt. scale, p=.02).
Rogers et al. 2024	NGO report	Environment	UK	Longitudinal	Media coverage	After eight out of 12 Insulate Britain protests, there were hundreds of media mentions of "home insulation" (up from near-zero before protests). The other four appear to have received no media response.
Rogers et al. 2025	NGO report	Environment	Sweden	Longitudinal	Protester support, Salience	12% of Swedes found Restore Wetlands actions to be justified. In weeks that followed a protest, there were 84% more media mentions of wetlands.
Scheuch et al. 2024	Peer-reviewed	Environment and animal rights	UK	Cross-sectional	Media coverage	Case study of radical UK climate actions shows that two small, disruptive actions received about as many features in large UK news sources (resp. 57 and 44) as a very large non-disruptive action in the same period (53).

Reference	Type	Issue(s)	Country	Design	Outcome type(s)	Key results
Shuman et al. 2021	Peer-reviewed	Ethnic discrimination	Israel and US	Experimental	Concern and policy	Across three studies, compared to no protest, disruptive protest somewhat increases support for concessions, but only among respondents who are ideologically distant from the protesters (by 0.66-0.96 pt. on 7-pt. scale, $.01 \leq p \leq 1$). Conventional protest has no effect on these respondents.
Valentim 2023	Peer-reviewed	Environment	Germany	Diff-in-diff	Concern and policy, behavior	Having at least one FFF protest in a municipality increased Green party vote share in the next election by an additional 2.3-2.4 pp. The effect increases by 0.5 pp. for each additional protest ($p<.01$). Small numbers of protests cause a very small increase in climate policy supprt (ca. 0.04 s.d.); larger numbers cause a slightly larger increase (ca. 0.08 s.d., all $p<.10$). No effect on perceived importance of climate change.
Vandeweerdt 2025	Peer-reviewed	Environment	Denmark and UK	Experimental	Salience, Concern and policy, Behavior	Compared to a pure control, in two studies, participants exposed to real news content about disruptive protest are 19 and 10 pp. more likely to name climate as a top 3 issue ($p<.001$), but also less supportive of the protesters' specific demands (by 0.17 and 0.14 on 5-pt. scale, $p=.05$ and $<.05$). No effect on climate concern, support for other climate policies, or collective action intentions.
Wouters 2013	Peer-reviewed	Mixed	Belgium	Cross-sectional	Media coverage	If a protest was disruptive (i.e. arrests made or road blockade/violence used), odds of being covered on TV increase by a factor of 3.07 (logistic regression coef. 1.123, $p<.001$).

Notes: Diff-in-diff = Difference-in-differences. FFF = Fridays for Future. XR = Extinction Rebellion. pp. = percentage points. pt. = scale points. P-values are reported for significant differences (incl. marginal ones) whenever the original paper reports them, or when they can be calculated using supplementary information. We report p-values without multiple testing correction for comparability, as only few papers also offered p-values with correction.

Table 2: Overview of all studies/conditions excluded from this review due to violent protest elements.

Reference	Excluded	Type of violence
Simpson, Willer, and Feinberg 2022	All	Incitement to violence against people, permanent property damage
Farrer and Klein 2022	All	Permanent property damage
Feinberg, Willer, and Kovacheff 2020	Study 1 Highly extreme protest condition, Study 2 and Study 4	Actual or incitement to violence against people
Bugden 2020	Violent protest condition	Violence against people
Fuller et al. 2025	Sabotage condition	Permanent property damage
Kleer, Teutem, and De Vries 2024	Violent protest condition	Attacking police
Huff and Kruszewska 2016	Violent protest condition	Violence against people
Shuman et al. 2021	Violent protest condition	Attacking police

References

Akehurst, Sam. 2023. *What happens when people see direct action protests on climate?* Strong Message Here, February 2, 2023. https://strongmessagehere.substack.com/p/what-happens-when-people-see-direct.

Badullovich, N, D Tucker, R Amoako, P Ansah, B Davis, U Horoszko, H Zakiyyah, and E Maibach. 2024. How does public perception of climate protest influence support for climate action? *npj Climate Action* 3 (1): 16.

Brehm, Johannes, and Henri Gruhl. 2024. Increase in concerns about climate change following climate strikes and civil disobedience in Germany. *Nature Communications* 15 (1): 2916.

Bugden, Dylan. 2020. Does climate protest work? Partisanship, protest, and sentiment pools. *Socius* 6:2378023120925949.

Fabel, Marc, Matthias Flückiger, Markus Ludwig, Helmut Rainer, Maria Waldinger, and Sebastian Wichert. 2025. The relationship between the youth-led Fridays for Future climate movement and voting, politician and media behaviour in Germany. *Nature Human Behaviour* 9 (3): 481–495.

Farrer, Ben, and Graig R Klein. 2022. How radical environmental sabotage impacts us elections. *Terrorism and Political Violence* 34 (2): 218–239.

Feinberg, Matthew, Robb Willer, and Chloe Kovacheff. 2020. The activist's dilemma: extreme protest actions reduce popular support for social movements. *Journal of personality and social psychology* 119 (5): 1086.

Foxe, Jana, Nives Dolšak, and Aseem Prakash. 2024. Varieties of climate activism: assessing public support for mainstream and unorthodox climate action in the United Kingdom. *Environmental Research Communications* 6 (11): 111006.

Fuller, Kylie, Romain Ferrali, Lucas Francou Damesin, Izzy Gainsburg, Brent Simpson, and Robb Willer. 2025. Extreme protest tactics reduce support for the climate movement and climate mitigation policies. Preprint. https://doi.org/10.31235/osf.io/n6aw2.

Gonzatti, Daniel Saldivia, Sophia Hunger, and Swen Hutter. 2023. Analysebericht zur Studie 'Environmental Protest Effects on Public Opinion: Experimental Evidence from Germany'. Preprint. https://doi.org/10.31219/osf.io/5mb3u.

Haas, Violeta I., Tim Wappenhans, Ferdinand Geißler, Felix Hartmann, Daniel Bischof, Johannes Giesecke, Macartan Humphreys, Heike Klüver, and Lukas F. Stoetzer. 2025. *Beyond persuasion: protest's direct behavioral impact on bystanders.* Preprint, June. https://osf.io/preprints/osf/42s8e.

Huff, Connor, and Dominika Kruszewska. 2016. Banners, barricades, and bombs: the tactical choices of social movements and public opinion. *Comparative Political Studies* 49 (13): 1774–1808.

Joly, Philippe, Aiko Wagner, and Arne Carstens. 2025. Worth the risk? Mass obstruction, vigilantism, and public support for climate activists. *European Political Science Review,* 1–9.

Kenward, Ben. 2024. Återställ våtmarker (ÅV) impact evaluation - preliminary report 0.6. Preprint. https://www.benkenward.com/articles/preliminary_report0.6.pdf.

Kenward, Ben, and Cameron Brick. 2024. Large-scale disruptive activism strengthened environmental attitudes in the United Kingdom. *Global Environmental Psychology* 2:1–35.

Kleer, Dirck de, Simon van Teutem, and Catherine E De Vries. 2024. Public support for pro-climate and counter-climate protests. Preprint. https://files.osf.io/v1/resources/z7uvt_v1/providers/osfstorage/667d84f8d6a72902e90b1417?action=download&direct&version=3.

Kountouris, Yiannis, and Eleri Williams. 2023. Do protests influence environmental attitudes? Evidence from Extinction Rebellion. *Environmental Research Communications* 5 (1): 011003.

Nylund, Jarren L, Michael Thai, and Matthew J Hornsey. 2025. The climate activist's dilemma: extreme protests reduce movement support but raise climate concern and intentions. *Journal of Environmental Psychology,* 102682.

Ostarek, Markus, Lennart Klein, David Pomerenke, Nadel Sam, and Cathy Rogers. 2025. *Making a scene and making sense: how disruptiveness and logic influence media coverage and support for protests.* Technical report. Social change lab, February. https://www.socialchangelab.org/makingascenceandmakingsense.

Ostarek, Markus, Lennart Klein, Cathy Rogers, James Ozden, and Laura Thomas-Walters. 2025. Short and long-term effects of disruptive animal rights protest. *Humanities and Social Sciences Communications* 12 (1): 1–13.

Ostarek, Markus, Erik Scheuch, Sam Nadel, and Cathy Rogers. 2022. *Protest and the ballot box.* Technical report. Social Change Lab, May. https://www.socialchangelab.org/_files/ugd/503ba4_db9ae9e6d8674810ba65fbb193867660.pdf.

Ostarek, Markus, Brent Simpson, Cathy Rogers, and James Özden. 2024. Radical climate protests linked to increases in public support for moderate organizations. *Nature Sustainability,* 1–7.

Özden, James, and Sam Glover. 2022. *Public opinion polling: Just Stop Oil.* Technical report. Social Change Lab. https://www.socialchangelab.org/_files/ugd/503ba4_db9ae9e6d8674810ba65fbb193867660.pdf.

Rogers, Cathy, Markus Ostarek, Mabli Jones, and James Özden. 2024. *What was the impact of the Insulate Britain campaign?* Technical report. Social Change Lab, March. https://www.socialchangelab.org/post/what-was-the-impact-of-the-insulate-britain-campaign.

Rogers, Cathy, Markus Ostarek, Nadel Sam, and Ben Kenward. 2025. *What was the impact of the swedish restore wetlands campaign?* Technical report. Social change lab, February. https://www.socialchangelab.org/restore-wetlands-campaign.

Scheuch, Eric G, Mark Ortiz, Ganga Shreedhar, and Laura Thomas-Walters. 2024. The power of protest in the media: examining portrayals of climate activism in UK news. *Humanities and Social Sciences Communications* 11 (1): 1–12.

Shuman, Eric, Tamar Saguy, Martijn van Zomeren, and Eran Halperin. 2021. Disrupting the system constructively: testing the effectiveness of nonnormative nonviolent collective action. *Journal of personality and social psychology* 121 (4): 819.

Simpson, Brent, Robb Willer, and Matthew Feinberg. 2022. Radical flanks of social movements can increase support for moderate factions. *PNAS nexus* 1 (3): pgac110.

Valentim, António. 2023. Repeated exposure and protest outcomes: how Fridays for Future protests influenced voters. Preprint, SocArXiv. https://doi.%20org/10.31235/osf.%20io/m6dpg%20(2023).

Vandeweerdt, Clara. 2025. The activist's trade-off: climate disruption buys salience at a cost. *Political Behavior,* Forthcoming.

Wouters, Ruud. 2013. From the street to the screen: characteristics of protest events as determinants of television news coverage. *Mobilization: An International Quarterly* 18 (1): 83–105.