A dataset of blockage, vandalism, and harassment activities for the cause of climate change mitigation

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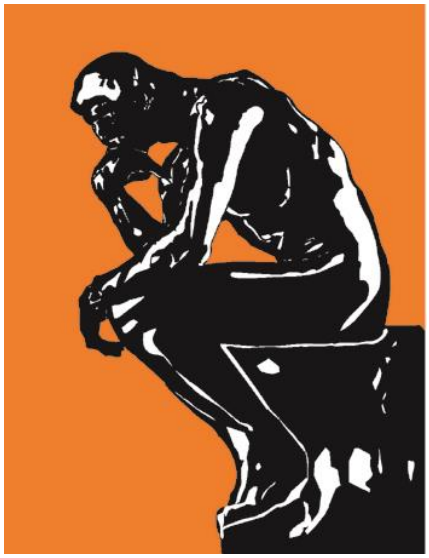

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"[...] only by uniting the power of the entire village could they chase Snake away."

In "Virtue of Sacrifice"; *The Kingfisher Story Collection* (2022a)

Abstract

Environmental activism is crucial for raising public awareness and support toward addressing the climate crisis. However, using climate change mitigation as the cause for blockage, vandalism, and harassment activities might be counterproductive and risk causing negative repercussions and declining public support. The paper describes a dataset of metadata of 89 blockage, vandalism, and harassment events happening in recent years. The dataset comprises three main categories: 1) Events, 2) Activists, and 3) Consequences. For researchers interested in environmental activism, climate change, and sustainability, the dataset is helpful in studying the effectiveness and appropriateness of strategies to raise public awareness and support. For researchers in the field of security studies and green criminology, the dataset offers resources to study features and impacts of blockage, vandalism, and harassment events. The Bayesian Mindsponge Framework (BMF) analytics was employed to validate the dataset. Consequently, the estimated result aligns with the Mindsponge Theory's theoretical reasoning.

Keywords: environmental activism; art vandalism; harassment; road blockage; climate change; violence; event disruption; Mindsponge Theory

1. BACKGROUND

Environmental activism is essential for increasing awareness about environmental deterioration and motivating people to reduce or halt ecologically detrimental actions, like those that cause climate change and biodiversity loss crises (Hungerman & Moorthy, 2023; Naaraayanan et al., 2021; Scheidel et al., 2020; Wolbring & Gill, 2023). Although environmental activists' enthusiasm and devotion should be recognized, various groups of activists are supporting the radical environmentalist movement that favors employing vandalism measures to achieve their principal purpose (Carson et al., 2012). Such measures include but are not limited to the vandalism of priceless artworks by world-renowned painters, road blockages during rush-hour traffic, and harassment of business owners and managers (Alao, 2022; Grieshaber, 2023). Vandalism and harassment actions for promoting climate change mitigation can result in negative repercussions and may decline public support for the environmental cause.

More empirical studies are required to understand the impacts of inappropriate blockage, vandalism, and harassment actions. Therefore, we have compiled a dataset of blockage, vandalism, and harassment events that were popular in the mass media (e.g., news and social media posts) to support the study of these events. We expect the dataset will aid the knowledge generation in the field of environmental activism and societal transitions to adapt to climate change and reduce the cost of doing research (Nguyen & Jones, 2022; Vuong, 2018, 2021; Vuong & Nguyen, 2023).

2. DATA DESCRIPTION

2.1. Data sample

The dataset recorded 89 cases of blockage, vandalism, and harassment for the cause of fighting climate change that happened in 13 countries. These countries are primarily high-income Western countries in Europe; only Australia and Canada are two non-European countries (see Figure 1). The United Kingdom (UK), Italy, Germany, France, and Spain are the five countries that had the highest number of cases, 60, 8, 5, 4, and 3 cases, respectively.

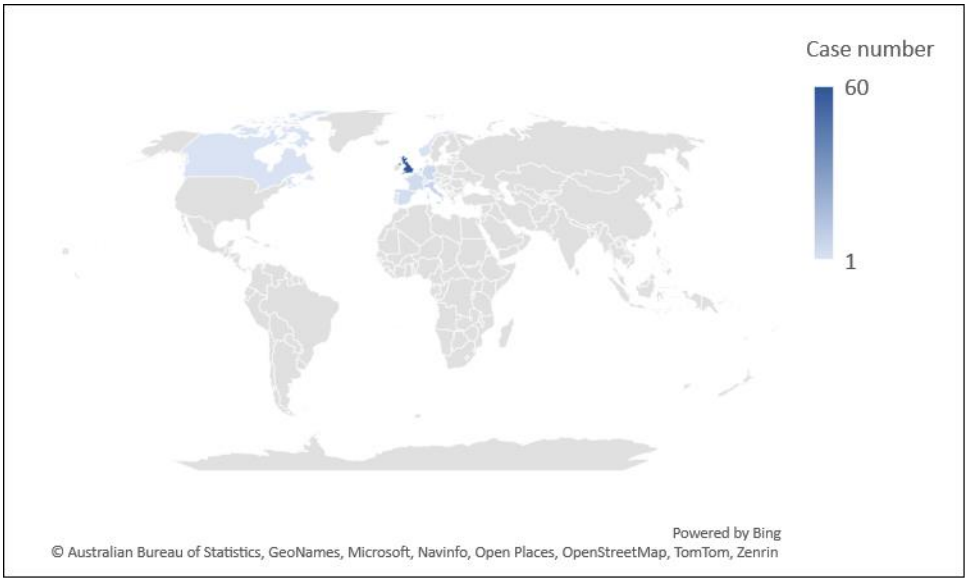

Figure 1: The distribution map of the blockage, vandalism, and harassment cases

These events were conducted mainly by 14 environmentalist groups, with Extinction Rebellion, Just Stop Oil, and Insulate Britain being the three most active groups. These groups participated in 29.21%, 24.72%, and 20.22% of cases, respectively (see Figure 2-A). Road blockage, sabotage, and art vandalism are the three most frequently conducted acts, with 47.19%, 43.82%, and 28.09% of the cases (see Figure 2-B). The most incurred direct impact is damaged property while blocking emergency services and injured people ranked second simultaneously, with 4.49% of the case (see Figure 2-C). Most blockage, vandalism, and harassment events end with the intervention of police (77.53%) and the activists being convicted (73.03%) (see Figure 2-D).

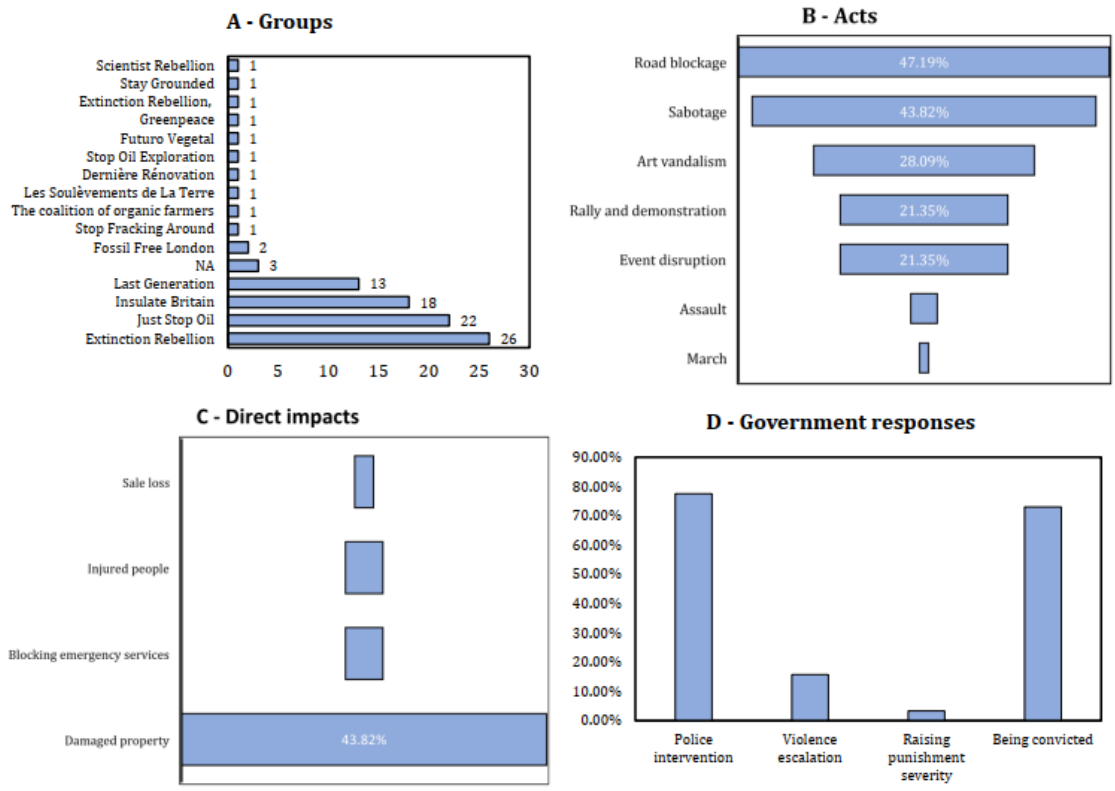

Figure 2: Some statistical details of blockage, vandalism, and harassment cases

2.2. Data coding

This section displays how the data in three main categories of the dataset were coded:

1) Event
2) Activists
3) Consequences

As the data were retrieved from the news, so most of the variables are categorical variables (including binary variables). We describe categorical variables using seven kinds of information corresponding with seven columns: “Sub-category,” “Variable,” “Name,” “Explanation,” “Code,” “Frequency,” and “Proportion.”

2.2.1. Event

The first category of the dataset includes five sub-groups that focus on demonstrating the blockage, vandalism, and harassment events that happened: Overview of the event (four variables), targeted sector (seven variables from *A1-A7*), targeted location (two variables from *B1-B2*), targeted subjects (two variables from *C1-C2*), and affected social groups in the events (four variables from *D1-D4*).

Table 1: Description of variables in the Event category.

Sub-category	Variable	Name	Explanation	Code	Frequency	Proportion
Overview	Date	Date	The date the action took place	NA	NA	NA
	Country	Country	The country the action took place	NA	NA	NA
	Location	Location of the activity	The location where the action took place	NA	NA	NA
	Groups	Environmentalist groups	The environmentalist groups that participated in the action	NA	NA	NA
Targeted sector	A1	Sport	Whether the action took place at the sports events	1 = Yes	8	8.99%
				0 = No	81	91.01%
	A2	Transportation	Whether the action took place at the conveyance of traffic or at the place associated with transportation	1 = Yes	39	43.82%
				0 = No	50	56.18%
	A3	Agriculture	Whether the action took place at agriculture-related facilities or organizations	1 = Yes	1	1.12%
				0 = No	88	98.88%

	A4	Energy	Whether the action took place at the energy-related facilities or organizations	1 = Yes	6	6.74%
				0 = No	83	93.26%
	A5	Finance	Whether the action took place at the finance-related facilities or organizations	1 = Yes	5	5.62%
				0 = No	84	94.38%
	A6	Art, science, and culture	Whether the action took place at the facilities or organizations that are related to art, science, and culture	1 = Yes	35	39.33%
				0 = No	54	60.67%
	A7	Press	Whether the action took place at the press-related facilities or organizations	1 = Yes	2	2.25%
				0 = No	87	97.75%
Targeted location	B1	Private/corporate place	Whether the action happened in a private/corporate place	1 = Yes	25	28.09%
				0 = No	64	71.91%
	B2	Public place	Whether the action happened in a private/corporate place	1 = Yes	70	78.65%
				0 = No	19	21.35%
Targeted subjects	C1	People	Whether the action was	1 = Yes	53	59.55%

			aimed at affecting people	0 = No	36	40.45%
	C2	Properties	Whether the action was aimed at affecting properties	1 = Yes	75	84.27%
				0 = No	14	15.73%
Affected social groups	D1	Elitist/wealthy people	Whether the action affected elitists/wealthy people	1 = Yes	12	13.48%
				0 = No	77	86.52%
	D2	Corporate shareholders	Whether the action affected corporate shareholders	1 = Yes	10	11.24%
				0 = No	79	88.76%
	D3	Politicians	Whether the action affected politicians	1 = Yes	5	5.62%
				0 = No	84	94.38%
	D4	Ordinary people	Whether the action was aimed at affecting people	1 = Yes	73	82.02%
				0 = No	16	17.98%

2.2.2. Activists

The second category concentrates on factors associated with the activists, like their motivations (seven variables from *E1-E7*), fallacy and hate speech of their messages (four variables from *F1-F4*), and their act (seven variables from *G1-G7*).

Table 2: Description of variables in the Activists category.

Sub-category	Variable	Name	Explanation	Code	Frequency	Proportion
Motivation	E1	Raise awareness about climate change	Whether the action was to raise public awareness about climate change	1 = Yes	75	84.27%
				0 = No	14	15.73%
	E2	Raise awareness about biodiversity loss	Whether the action was to raise public awareness about biodiversity loss	1 = Yes	8	8.99%
				0 = No	81	91.01%
	E3	Raise awareness about other environmental problems other than climate change and biodiversity loss	Whether the action was to raise public awareness about environmental problems other than climate change and biodiversity loss	1 = Yes	11	12.36%
				0 = No	78	87.64%
	E4	Raise awareness of non-environmental problems (socio-economic issues)	Whether the action was to raise public awareness about non-environmental problems (socio-economic issues)	1 = Yes	39	43.82%
				0 = No	50	56.18%
	E5	Social issues' details	Details of the socio-economic issues	NA	NA	NA

	E6	Request/Pressure the government to act	Whether the action was to request/pressure the government to act	1 = Yes	70	78.65%
				0 = No	19	21.35%
	E7	Request/Pressure business to stop operation/emission	Whether the action was to request/pressure business to stop operation/emission	1 = Yes	15	16.85%
				0 = No	74	83.15%
Fallacy and hate speech	F1	Fallacy	The fallacy level of the messages provided by the activists	2 = Fallacy	17	19.10%
				1 = Suspicious fallacy	3	3.37%
				0 = No fallacy	60	67.42%
	F2	Fallacy evidence	Evidence for variable F1	NA	NA	NA
	F3	Hate speech	The level of hate speech in the messages provided by the activists	2 = Hate speech	3	3.37%
				1 = Suspicious hate speech	3	3.37%
				0 = No hate speech	72	80.90%

	F4	Hate speech evidence	Evidence for variable F3	NA	NA	NA
Act	G1	Rally and demonstration	Whether the action is conducted in the form of a rally or demonstration	1 = Yes	19	21.35%
				0 = No	70	78.65%
	G2	March	Whether the action is conducted in the form of a march	1 = Yes	1	1.12%
				0 = No	88	98.88%
	G3	Event disruption	Whether the action is conducted in the form of event disruption	1 = Yes	19	21.35%
				0 = No	70	78.65%
	G4	Sabotage	Whether the action is conducted in the form of sabotage	1 = Yes	39	43.82%
				0 = No	50	56.18%
	G5	Road blockage	Whether the action is conducted in the form of road blockage	1 = Yes	42	47.19%
				0 = No	47	52.81%
	G6	Assault	Whether the action is conducted in the form of assault or harassment	1 = Yes	3	3.37%
				0 = No	86	96.63%
	G7	Art vandalism	Whether the action is conducted in the	1 = Yes	25	28.09%
				0 = No	64	71.91%

			form of art vandalism			

2.2.3. Consequences

The final category comprises the data demonstrating the direct impacts of the blockage, vandalism, and harassment events (five variables from *H1-H5*) and the responses of the government (four variables from *I1-I4*).

Table 3: Description of variables in the Consequences category.

Sub-category	Variable	Name	Explanation	Code	Frequency	Proportion
Direct impacts	H1	Damaged property	Whether the action damaged property	1 = Yes	39	43.82%
				0 = No	50	56.18%
	H2	Sale loss	Whether the action caused a sales loss	1 = Yes	2	2.25%
				0 = No	87	97.75%
	H3	The total amount of loss due to the action	The total amount of loss due to the action	NA	NA	NA
	H4	Injured people	Whether there were injured people due to the action	1 = Yes	4	4.49%
				0 = No	85	95.51%
	H5	Blocking emergency services	Whether the action blocked emergency services	1 = Yes	4	4.49%
				0 = No	85	95.51%

Government	I1	Police intervention	Whether there was police intervention	1 = Yes	69	77.53%
				0 = No	20	22.47%
	I2	Violence escalation	Whether there was violence escalation between the protestors, policemen, and other citizens	1 = Yes	14	15.73%
				0 = No	75	84.27%
	I3	Raising punishment severity	Whether the government raised the bar of punishment	1 = Yes	3	3.37%
				0 = No	86	96.63%
	I4	Being convicted	Whether the people were convicted/arrested due to the action	1 = Yes	65	73.03%
				0 = No	24	26.97%

3. EXPERIMENTAL DESIGN, MATERIALS AND METHODS

3.1. Data design and collection procedure

The dataset was generated with two main steps: 1) identifying the event and 2) recording the metadata of the event.

To identify the blockage, vandalism, and harassment events, we initially used search tools (e.g., Google Search, MSN) to check popular events on mass media. Based on such information, we identified environmental activist groups that frequently appeared. Then, we traced relevant information about these groups and gathered their conducted events, which are shown in the press. The information (i.e., news) collected from those events was later used to retrieve the metadata of the blockage, vandalism, and harassment events.

In the second step, we designed a questionnaire to retrieve the metadata from the collected news for each event. The Mindsponge Theory was employed to design the structure of the

questionnaire. The theory is a theory of mind developed from the mindsponge mechanism, a socio-psychological framework, and recent evidence from brain and life sciences (Vuong, 2023; Vuong & Napier, 2015). Specifically, the Mindsponge Theory considers the mind and the environment as two major spectrums. The mind is defined as an information collection-cum-processor, while the environment is theoretically a larger information-processing system (e.g., the Earth system, the social system, etc.) that includes the human mind.

Based on this categorization, we deem the activist conducting the blockage, vandalism, and harassment events as minds, while the backgrounds where the events took place are deemed as the surrounding environment with which the activist interacted. Therefore, Events and Activists are classified as two primary categories of the dataset. Moreover, the interactions between the activists and the surrounding environment eventually led to certain results. Such results are classified into the third category of the dataset: Consequences.

Two authors implemented the event identification and metadata retrieval processes from September 8 to September 26, 2023. The two authors also crosschecked to ensure the quality of the data retrieval and discussed with each other when encountering any ambiguous information. Eventually, 89 cases were recorded. The metadata's sources (i.e., links to the news) are included in the last column of the dataset.

3.2. Dataset validation

The Bayesian Mindsponge Framework (BMF) analytics was employed to check the validity of the dataset (Nguyen et al., 2022; Vuong et al., 2022). The method employs the Mindsponge Theory for theoretical reasoning and Bayesian inference for statistical analysis (Gill, 2014; McElreath, 2018; Vuong, 2023), which is also compatible with the dataset's design.

To check the validity of the dataset, we conducted an analysis to examine which types of activism are associated with a higher probability of escalation into violence. The Mindsponge Theory suggests that individuals' thinking and behaviors are products of the information process of the mind (the information collection-cum-processor), which aims to maximize the perceived benefits and minimize the perceived costs for prolonging the existence of the system in one way or another, such as through survival, growth, and reproduction (Vuong, 2022b, 2023). Based on this reasoning, we assume that a violent reaction is a costly action that can cause detrimental effects to all the people involved. Therefore, the situation will escalate into violence when at least one party is involved in or affected by the activism events when they perceive violence to be more beneficial rationally and emotionally than non-violence alternatives. If the estimated results align with this theoretical reasoning, the data quality can be deemed validated by the Mindsponge Theory.

The analysis was conducted using the bayesvl R package to estimate the following model (La & Vuong, 2019):

$$ViolenceEscalation \sim normal\left(\log\left(\frac{\mu_i}{1-\mu_i}\right), \sigma\right) \quad (1.1)$$

$$\log\left(\frac{\mu_i}{1-\mu_i}\right) = \beta_0 + \beta_1 * RallyDemonstration_i + \beta_2 * March_i + \beta_3 * EventDisruption_i + \beta_4 * Sabotage_i + \beta_5 * RoadBlockage_i + \beta_6 * Assault_i + \beta_7 * ArtVandalism_i \quad (1.2)$$

$$\beta \sim normal(M, S) \quad (1.3)$$

The probability around the mean $\log\left(\frac{\mu_i}{1-\mu_i}\right)$ is determined by the form of the normal distribution, whose width is specified by the standard deviation σ. μ_i indicates the event i's probability of being escalated into violence; $RallyDemonstration_i$ indicates whether event i was conducted in the form of a rally and demonstration; $March_i$ indicates whether event i was conducted in the form of a march; $EventDisruption_i$ indicates whether event i was conducted in the form of event disruption; $Sabotage_i$ indicates whether event i was conducted in the form of sabotage; $RoadBlockage_i$ indicates whether event i was conducted in the form of road blockage; $Assault_i$ indicates whether event i was conducted in the form of assault or harassment; $ArtVandalism_i$ indicates whether event i was conducted in the form of art vandalism. Model 1 has nine parameters: the coefficients, β_1 - β_7 , the intercept, β_0, and the standard deviation of the "noise", σ. The coefficients of the predictor variables are distributed as a normal distribution around the mean denoted M and with the standard deviation denoted S.

Table 4: Estimated results of Model 1

Parameters	Mean	Standard deviation	*n_eff*	*Rhat*
Constant	-8.10	4.61	3800	1
RallyDemonstration	-3.52	1.55	5832	1
March	-5.86	6.85	5784	1
EventDisruption	-9.69	5.69	4682	1
Sabotage	0.38	2.11	4568	1
RoadBlockage	8.16	4.46	3208	1
Assault	7.56	4.64	3230	1
ArtVandalism	-5.98	7.21	5152	1

All the estimated results of Model 1 are shown in Table 4. The effective sample size (*n_eff*) is larger than 1000, and the shrink factor (*Rhat*) is equal to 1 in all cases of parameters. These statistics suggest that Markov chains of Model 1 are all well-convergent. Visually, the Markov chains shown in the trace plots also confirm the convergence: fluctuating around a central equilibrium (see Figure 3). The estimated results are qualified for interpretation as the Markov chains are convergent.

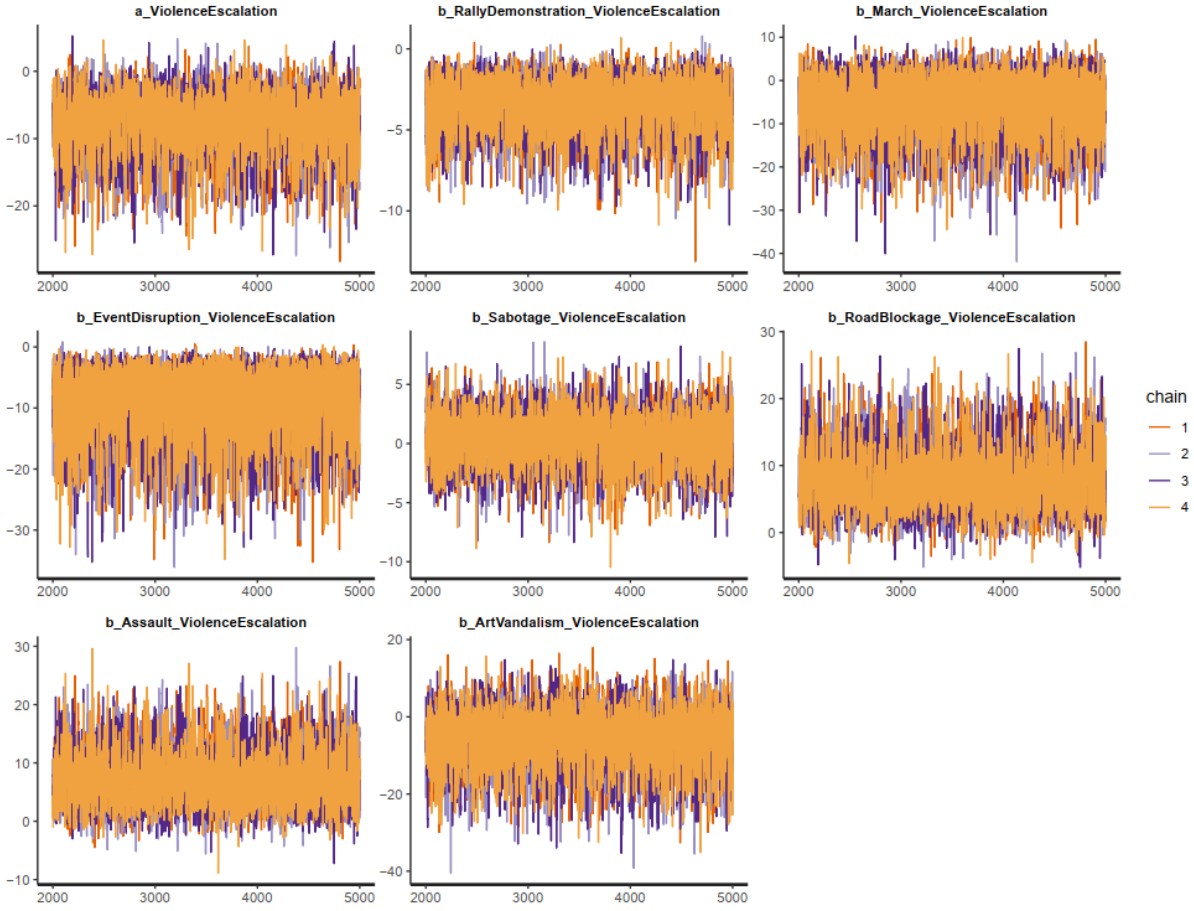

Figure 3: Model 1's trace plots

The estimated results show that rally and demonstration ($M_{RallyDemonstration}$= -3.52 and $S_{RallyDemonstration}$= 1.55), march (M_{March}= -5.86 and S_{March}= 6.85), event disruption ($M_{EventDisruption}$= -9.69 and $S_{EventDisruption}$= 5.69), and art vandalism ($M_{ArtVandalism}$= -5.98 and $S_{ArtVandalism}$= 7.21) are negatively associated with the probability of violence escalation. Meanwhile, road blockage ($M_{RoadBlockage}$= 8.16 and $S_{RoadBlockage}$= 4.46) and assault ($M_{Assault}$= 7.56 and $S_{Assault}$= 4.64) are positively associated with the probability of violence escalation, and sabotage has an ambiguous effect. The coefficients' posterior distributions are shown in Figure 4.

These results make sense as rallies, demonstrations, and marches are two common types of activism and legally accepted in high-income Western countries, while event disruption and

art vandalism are two types of activism that aim at entertainment purposes and seemingly do not have negative effects on other people's survival demand. However, road blockage can cause adverse effects on people using the roads (e.g., traffic safety, delayed work, emergency, etc.), while assault or harassment directly threatens the person's safety. Therefore, the dataset can be considered valid through the theoretical reasoning of the Mindsponge Theory.

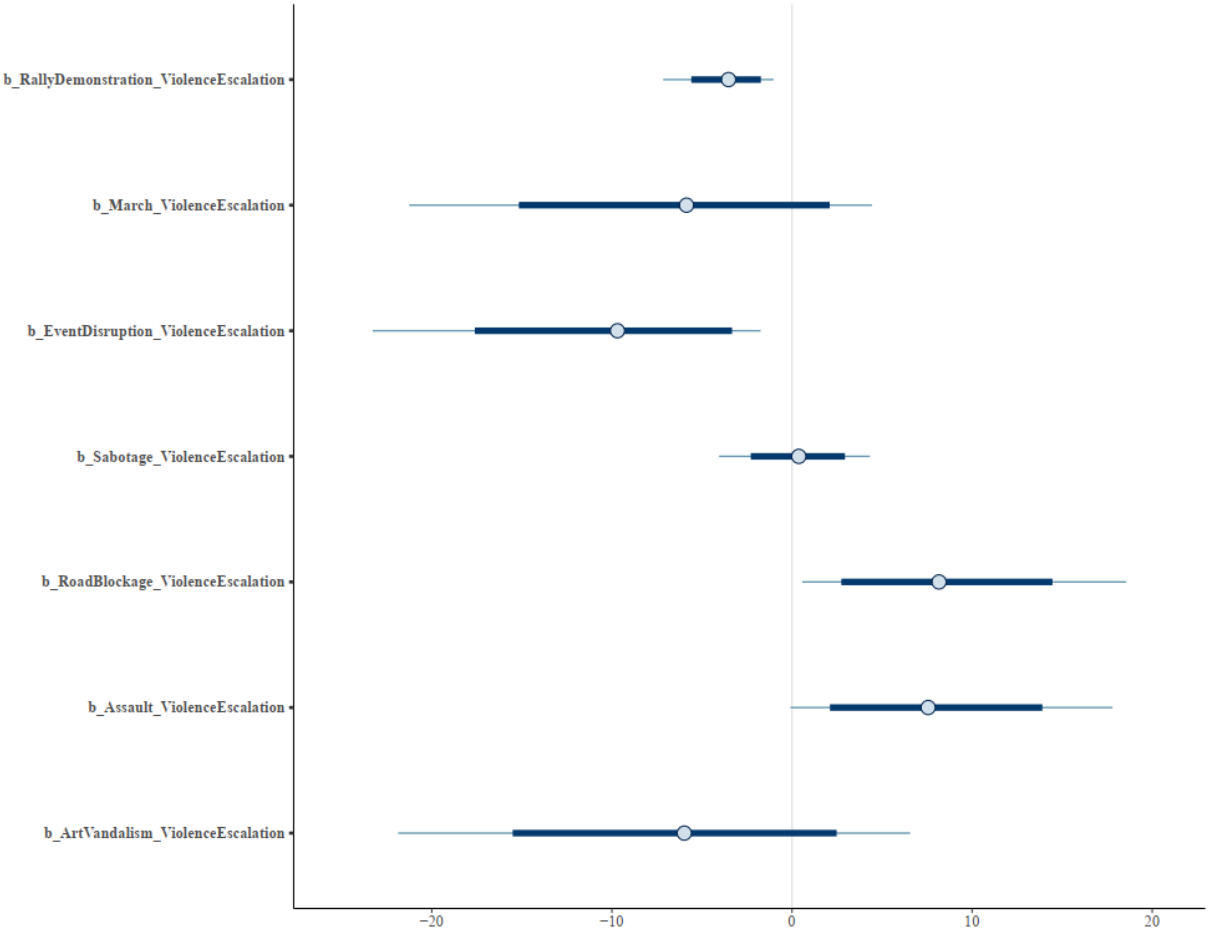

Figure 4: Model 1's posterior distributions

```
# Load data and package

data1<-read.csv("D:/.../Environment art_Dataset_sorted.csv",header =
TRUE,stringsAsFactors = TRUE)
library(bayesvl)


# Prepare data

data1$RallyDemonstration<-data1$G1
data1$March<-data1$G2
```

```
data1$EventDisruption<-data1$G3
data1$Sabotage<-data1$G4
data1$RoadBlockage<-data1$G5
data1$ArtVandalism<-data1$G7


data1$ViolenceEscalation<-data1$I2


# Model construction
model1a<-bayesvl()
model1a<-bvl_addNode(model1a,"ViolenceEscalation","binom")
model1a<-bvl_addNode(model1a,"RallyDemonstration","binom")
model1a<-bvl_addNode(model1a,"March","binom")
model1a<-bvl_addNode(model1a,"EventDisruption","binom")
model1a<-bvl_addNode(model1a,"Sabotage","binom")
model1a<-bvl_addNode(model1a,"RoadBlockage","binom")
model1a<-bvl_addNode(model1a,"Assault","binom")
model1a<-bvl_addNode(model1a,"ArtVandalism","binom")

model1a<-bvl_addArc(model1a,"RallyDemonstration","ViolenceEscalation","slope")
model1a<-bvl_addArc(model1a,"March","ViolenceEscalation","slope")
model1a<-bvl_addArc(model1a,"EventDisruption","ViolenceEscalation","slope")
model1a<-bvl_addArc(model1a,"Sabotage","ViolenceEscalation","slope")
model1a<-bvl_addArc(model1a,"RoadBlockage","ViolenceEscalation","slope")
model1a<-bvl_addArc(model1a,"Assault","ViolenceEscalation","slope")
model1a<-bvl_addArc(model1a,"ArtVandalism","ViolenceEscalation","slope")

# Generate Stan code
model_string1a<- bvl_model2Stan(model1a)
cat(model_string1a)
```

```
# Model Fit

model1a<-bvl_modelFit(model1a, data1, warmup = 2000, iter = 5000, chains = 4,cores = 4)


# Visualize logical network of Model 1

bvl_bnPlot(model1a)


# Visualize trace plots of Model 1

bvl_plotTrace(model1a)


# Visualize posterior distributions of Model 1

bvl_plotIntervals(model1a,c("b_RallyDemonstration_ViolenceEscalation","b_March_ViolenceEscalation","b_EventDisruption_ViolenceEscalation","b_Sabotage_ViolenceEscalation","b_RoadBlockage_ViolenceEscalation","b_Assault_ViolenceEscalation","b_ArtVandalism_ViolenceEscalation"))
```

4. LIMITATIONS

The method of identifying the blockage and vandalism events based on manual search is not exhaustive, so the dataset can only cover the events that were popular at the time of identification. Moreover, the metadata were mainly retrieved from news, so they face the risk of not being complete. For example, data demonstrating the sales loss and amount of loss caused by the activities are not complete because they are difficult to estimate, and not all losses caused by the events are reported on the news. The language used for search queries was English, so the geographical bias of the data is acknowledged (e.g., most events are in Western countries). Therefore, this dataset can be a valuable resource for conducting preliminary analysis, but the results should not be generalized.

5. DATA AVAILABILITY STATEMENT

The dataset and its description are deposited in the Zenodo repository: https://zenodo.org/records/10778224 (DOI:10.5281/zenodo.10778224).

REFERENCES

Alao, L. C. (2022). *A list of all artworks Just Stop Oil have attacked*. Evening Standard. Retrieved September 20 from https://www.standard.co.uk/news/uk/all-artworks-just-stop-oil-attacked-b1038844.html

Carson, J. V., LaFree, G., & Dugan, L. (2012). Terrorist and non-terrorist criminal attacks by radical environmental and animal rights groups in the United States, 1970–2007. *Terrorism and Political Violence*, *24*(2), 295-319. https://doi.org/10.1080/09546553.2011.639416

Gill, J. (2014). *Bayesian methods: A social and behavioral sciences approach* (Vol. 20). CRC press.

Grieshaber, K. (2023). *Climate protesters try to bring Berlin traffic to a halt*. AP. Retrieved September 13 from https://apnews.com/article/germany-climate-protests-berlin-road-blocks-a922cb5e0f317dc0c470f4a579da43d6

Hungerman, D., & Moorthy, V. (2023). Every day is earth day: Evidence on the long-term impact of environmental activism. *American Economic Journal: Applied Economics*, *15*(1), 230-258. https://doi.org/10.1257/app.20210045

La, V.-P., & Vuong, Q.-H. (2019). bayesvl: Visually learning the graphical structure of Bayesian networks and performing MCMC with'Stan'. *The Comprehensive R Archive Network (CRAN)*. https://cran.r-project.org/web/packages/bayesvl/index.html

McElreath, R. (2018). *Statistical rethinking: A Bayesian course with examples in R and Stan*. Chapman and Hall/CRC Press.

Naaraayanan, S. L., Sachdeva, K., & Sharma, V. (2021). The real effects of environmental activist investing. *European Corporate Governance Institute–Finance Working Paper*(743), 1-59.

Nguyen, M.-H., & Jones, T. E. (2022). Building eco-surplus culture among urban residents as a novel strategy to improve finance for conservation in protected areas. *Humanities & Social Sciences Communications*, *9*, 426. https://doi.org/10.1057/s41599-022-01441-9

Nguyen, M.-H., La, V.-P., Le, T.-T., & Vuong, Q.-H. (2022). Introduction to Bayesian Mindsponge Framework analytics: an innovative method for social and psychological research. *MethodsX*, *9*, 101808. https://doi.org/10.1016/j.mex.2022.101808

Scheidel, A., Del Bene, D., Liu, J., Navas, G., Mingorría, S., Demaria, F., . . . Temper, L. (2020). Environmental conflicts and defenders: A global overview. *Global environmental change*, *63*, 102104. https://doi.org/10.1016/j.gloenvcha.2020.102104

Vuong, Q.-H. (2018). The (ir)rational consideration of the cost of science in transition economies. *Nature Human Behaviour*, *2*(1), 5. https://doi.org/10.1038/s41562-017-0281-4

Vuong, Q.-H. (2021). The semiconducting principle of monetary and environmental values exchange. *Economics and Business Letters*, *10*(3), 284-290. https://doi.org/10.17811/ebl.10.3.2021.284-290

Vuong, Q.-H. (2022a). *The kingfisher story collection*. https://www.amazon.com/dp/B0BG2NNHY6

Vuong, Q.-H. (2022b). *A new theory of serendipity: Nature, emergence and mechanism*. De Gruyter. https://www.amazon.com/dp/B0C5C4LPF1

Vuong, Q.-H. (2023). *Mindsponge Theory*. Walter de Gruyter GmbH. https://www.amazon.com/dp/B0C3WHZ2B3/

Vuong, Q.-H., & Napier, N. K. (2015). Acculturation and global mindsponge: An emerging market perspective. *International Journal of Intercultural Relations*, *49*, 354-367. https://doi.org/10.1016/j.ijintrel.2015.06.003

Vuong, Q.-H., & Nguyen, M.-H. (2023). Kingfisher: Contemplating the connection between nature and humans through science, art, literature, and lived experiences. *Pacific Conservation Biology*. https://doi.org/10.1071/PC23044

Vuong, Q.-H., Nguyen, M.-H., & La, V.-P. (2022). *The mindsponge and BMF analytics for innovative thinking in social sciences and humanities*. Walter de Gruyter GmbH. https://www.amazon.com/dp/B0C4ZK3M74/

Wolbring, G., & Gill, S. (2023). Potential Impact of Environmental Activism: A Survey and a Scoping Review. *Sustainability*, *15*(4), 2962. https://doi.org/10.3390/su15042962