

Supplemental Material

"You can do better than that!" – Tweeting Scientists Addressing Politics on Climate Change and Covid-19

Supplemental A: Codebook

I Formal categories

V0 Coder

1 = Coder 1

2 = Coder 2

V1 ID (Tweet)

The ID of the tweet is to be taken from the data mask and transferred.

V2 Date

The date is to be entered in the format DD.MM.YYYY.

V3 Twitter handle

The Twitter handle is to be entered without the @-character. (e.g. c_drosten; VQuaschnig; CiesekSandra)

V4 Background scientist

What is the scientific background of the scientist?

1 = climate expert

2 = Covid-19 expert

V5 Type of post

What type of post is it?

1 = initial post (tweet)

2 = retweet with comment (quote)

3 = comment (reply)

II Content categories

V6 Addressing politics

Are politicians, political institutions or politics as a system addressed in the post?

0 = no

1 = yes

➔ If V6 = 0 (no addressing), then the coding ends at this point. Measures and strategies in which politics have decision-making authority and a reference to politics was made.

V6_1 Type of addressing

What kind of addressing is present?

1 = implicit

2 = explicit

Implicit:

Example: *"What an insane idea in the current situation and current danger from Omicron: abolish mandatory testing. I hope not also in hospitals or retirement/nursing homes? Related article: Risky booster privilege <https://t.co/10qVakIx0A>"* (own translation) (V6_1 = 0)

Explicit:

An explicit mention of politics (individuals, institution, system) is given.

Example: *"Politicians have not understood at all what has to be done to keep their empty 1.5-degree promise. Germany would have to become carbon dioxide neutral by 2030. I'd like to finally see action on this. #climatecrisis #COP26"* (own translation) (V6_1 = 1)

→ Filter V6_1_1, if V6_1 = 2 Filter continue with V6_1_1, if V6_2 = 1 continue with V_7

V6_1_1 Actor level

To which level(s) does the policy addressing refer (multiple answers possible)?

V6_1_1_1 Individual

0 = is not addressed

1 = is addressed

V6_1_1_2 Organisation/institution

0 = is not addressed

1 = is addressed

V6_1_1_3 System

0 = is not addressed

1 = is addressed

V6_1_2 @-mention

Is the actor mentioned with an @-mention?

0 = not present

1 = is present

V7 Calls to action

Are calls to action present?

0 = no calls to action

1 = calls to action

Calls to action

No calls to action present

Example: *"The Senate did not ignore my requests. Rather, I was not sure what to recommend. After all, I am a virologist and school closures are not in my area of expertise. The Berlin decisions show determination and the will to act. <https://t.co/z4tVVeNjd5>"* (own translation) (V7 = 0)

Calls to action are present

Examples: *I think that the politicians have understood this. At the moment, it's about the design. Austria has a good approach for daycare/school closure, I think. <https://t.co/pq0BW6OkFo>"* (own translation) (V7 = 1).

"Above all, a nationwide, uniform, systematic recording of infection cases in schools would be desirable. Measures should also be based on the regionally recorded incidence figures." (own translation) (V7 = 1)

V8 Evaluation

(How) is politics evaluated?

0 = no evaluation

1 = negative evaluation

2 = positive evaluation

3 = both positive and negative evaluations

No evaluation

No evaluation is visible.

Example: *"Above all, a nationwide, uniform, systematic recording of infection cases in schools would be desirable. Measures should also be based on regionally recorded incidence figures."* (own translation) (V8 = 0)

Negative evaluation of politics

Policymakers are evaluated negatively with regard to a condition or their actions/non-actions.

Example: *"The insufficient expertise of politics regarding the #climate crisis has been a main reason for the fatal wrong decisions of the last years so far. I had hoped that this would improve in the new Bundestag. There would also be the possibility to simply ask science. <https://t.co/dLXsTQ8bcE>"* (own translation) (V8 = 1)

Positive evaluation of politics

Politics is evaluated positively, with regard to a state of affairs, its actions/non-actions.

Example: *"That's right. My comment yesterday did refer to decision-making processes that are going on in many German states at the moment, but Berlin has now really shown how it's done. My respect for so much will to act and commitment! <https://t.co/nLXMZJFB6n>"* (own translation) (V8 = 2)

V9 Apportion of Blame

Is there an apportion of blame towards political actors?

0 = No, there is no blaming

1 = Yes, there is blaming

No apportion of blame

There is no apportion of blame towards political actors visible.

Example: *"What an important quote from Mr Lammert. This is exactly how scientists should behave when talking to politicians. <https://t.co/coxGgNlq5o>"* (V9 = 0)

Apportion of blame

There is an apportion of blame towards political actors visible, this can also be formulated in the form of an accusation.

Examples: *"It is interesting how German politics disregards laws in favour of the #coal industry again and again. First #Datteln4, now #HambacherForst. Dear @ArminLaschet: It would be nice if a state government could also observe German law."* (V9 = 1) (own translation)

"Politicians have not understood what needs to be done to keep their empty 1.5-degree promise. Germany should become carbon dioxide neutral by 2030. I would like to see action for once. #ClimateCrisis #COP26" (own translation) (V9= 1)

V10 Degrading resp. attribution of competence

Is competence attributed or degraded to political actors?

0 = None, neither competence attributed nor competence degraded.

1 = Yes, competence is attributed to political actors

2 = Yes, competence is attributed to political actors

3 = Competence is depreciated and attributed to political actors

No attribution or depreciation of competence

There is no recognizable attribution or depreciation of competence to political actors.

Example: *"@KFL3011 @befishytooo Science does not make political decisions. And politicians do not make decisions on scientific grounds alone. Politicians have to consider many aspects."* (own translation) (V10 = 0)

Degrading of competence

Scientists degrade competence of political actors. The decision of political actors contradicts the state of knowledge; this contradiction must be made clear.

Example: *"Blond or blue, Swabian or youth slang? As a researcher, I don't care, it's the facts that count. @Rezo-Music takes science seriously, has informed himself thoroughly, studied the IPCC report and asked experts. Unfortunately, this is not the case with all politicians. <https://t.co/ow9oIVRh3b>" (own translation) (V10 = 1)*

Attribution of competence

Competence is attributed to political actors.

Example: *"That's right. My comment yesterday referred to decision-making processes that are currently underway in many German states, but Berlin has now really shown how it is done. My respect for so much will to act and commitment! <https://t.co/nLXMZJFB6n>" (own translation) (V10 = 2)*

Supplemental B: Intercoder Reliability

Table 1. Krippendorff's Alpha Intercoder Reliability.

Variable	Variable Description	Krippendorff's alpha
V6	Addressing Politics	0,85
V6_1	Type of Addressing	0,91
V6_1_1_1	Individual Actor	0,90
V6_1_1_2	Organisational actor	0,95
V6_1_1_3	System actor	1,00
V6_1_2	@-mention	0,72
V7	Calls to action	0,76
V8	Evaluation	0,76
V9	Blaming	0,70
V10	Degrading or attributing competence	0,79

Notes: Variables 1-5 are formal variables, that were transferred from the Twitter dataset and are thus not included in the reliability test.

Supplemental C: Demographics and Number of Tweets per Expert

Table 1. Demographics and Number of Tweets per Expert.

Expert Code	Title	Subfield	Gender	Follower	Total Tweets (<i>n</i> = 5915)	Original (<i>n</i> = 1645)	Quote (<i>n</i> = 869)	Reply (<i>n</i> = 3401)
covidexpert1	Prof. Dr.	Virology	male	97,3100	152	57	35	60
covidexpert2	Prof. Dr.	Virology	female	158,300	491	106	64	321
covidexpert3	Prof. Dr.	Virology	male	139,100	71	42	6	24
covidexpert4	Prof. Dr.	Virology	female	137,600	204	42	99	64
covidexpert5	Prof. Dr.	Physics, neuroscience	female	70,600	633	77	69	487
climateexpert1	Prof. Dr.	Physics, oceanography, paleoclimatology	male	117,959	1681	504	294	883
climateexpert2	Prof. Dr.	Political economy, transformation research	female	105,190	631	105	123	403
climateexpert3	Prof. Dr.	Renewable energy systems	male	89,098	453	326	63	64
climateexpert4	Prof. Dr.	Energy economics, energy policies	female	45,352	975	252	66	657
climateexpert5	Dr.	Physics	female	10,861	624	136	50	438