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# **Table 1:** *Reach of news sites and political orientation of the audience*

|  |  |  |  |
| --- | --- | --- | --- |
| **News site** | **Reacha** | **Editorial lineb** | **Political orientation of the audiencec** |
| Zeit Online | 76.898.568 | Left-liberal | -0.711 |
| TAZ | 6.853.952 | Left | -1.142 |
| FOCUS | 193.717.542 | Conservative | -0.332 |
| Welt Online | 134.240.129 | Conservative | -0.347 |
| a Online reach was measured as the average in million visits (online + mobile) of each website the period under investigation (October 2019). Based on data provided by the German Audit Bureau of Circulation (IVW, 2021, <http://ausweisung.ivw-online.de/index.php>). b Editorial lines according to euro topics, 2021.c According to News Bias Monitor. Ranges from -2 most left-liberal to +2 most Conservative. (News Bias Monitor, 2021, <https://twitter-app.mpi-sws.org/media-bias-monitor/index.php>). The values for the political orientation are based on the Facebook API. The absolute values are not meaningful in the German context, but relative differences are. |

# **Table 2:** *Frequencies news sites, titles, dates*

|  |  |  |  |
| --- | --- | --- | --- |
| **News site**  | **Title of the article** | **Date**(dd.mm.yyyy) | **Coded comments per title**(N = 300) |
| Zeit Online | Rolf Mützenich accuses Greens of neoliberal climate policy | 06.10.2019 | 15 |
| Zeit Online | Climate policy: Federal government defends climate protection package | 07.10.2019 | 15 |
| Zeit Online | Climate Protection Act: Cabinet approves climate package | 09.10.2019 | 15 |
| Zeit Online | Extinction Rebellion: Does climate protest have to be left-wing? | 09.10.2019 | 15 |
| Zeit Online | Transport revolution: A transport revolution not only for the rich | 15.10.2019 | 15 |
| TAZ | Greens with their own climate package: Radical-realist impact | 06.10.2019 | 15 |
| TAZ | Debate about Extinction Rebellion: Esoteric! Naive! Empty of content! | 07.10.2019 | 15 |
| TAZ | Government climate protection programme: problem postponed again | 10.10.2019 | 6 |
| TAZ | Anja Siegesmund on climate in the constitution: Markus Söder should act | 11.10.2019 | 8 |
| TAZ | Climate Protests as Liberation: Extinction Rebellion is Ecstacy | 12.10.2019 | 16 |
| TAZ | Climate package in concrete terms: at least 5.50 euros more per flight | 15.10.2019 | 6 |
| TAZ | Extinction Rebellion climate protests: rebels seek alliance partners | 15.10.2019 | 9 |
| FOCUS | Criticism of the GroKo climate package | 06.10.2019 | 15 |
| FOCUS | Several hundred climate activists block bridge near Chancellery | 09.10.2019 | 15 |
| FOCUS | Climate plans of the Greens: From 7 litres of consumption, you pay more, says the ADAC | 11.10.2019 | 15 |
| FOCUS | Politics: DJ Tiefschwarz | 12.10.2019 | 15 |
| FOCUS | "That's just goody-goody": Tui boss takes a stand in flight shame debate | 16.10.2019 | 15 |
| Welt Online | Extinction Rebellion: Hundreds of climate activists camp in front of the Chancellery | 06.10.2019 | 15 |
| Welt Online | Government contradicts report on watered-down climate package | 07.10.2019 | 15 |
| Welt Online | Protesters glue themselves to gates of a combined heat and power plant | 11.10.2019 | 15 |
| Welt Online | CSU wants to address the concerns of the Greta generation | 14.10.2019 | 15 |
| Welt Online | AfD wants to completely stop climate protection policy in Germany | 15.10.2019 | 15 |

# **Table 3:** *Overview of the content-analytical categories*

|  |  |  |
| --- | --- | --- |
| **Reliabilitya**  | **Definition** | **Descriptive statistics** |
| **Variables on the level of the article** |
| News site (*PA* = 1, k-α = 1) | The news site on which the online comment was published. |  N = 300 (100%)Zeit Online (25%)TAZ Online (25%)FOCUS Online (25%)Welt Online (25%) |
| Date(*PA* = 1, *k-α* = 1) | The published date of the journalistic article (format: dd.mm.yyyy). | See table 2 |
| Title (*PA* = 1, *k-α* = 1) | The headline of the journalistic article. | See table 2 |
| **Variables on the level of the account** |
| Account name(*PA* = 1, *k-α* = 1) | The account name denotes the author name of the published user comment It can also be a nickname. |  |
| **Dichotomous motivation variables on the level of the comment**  |
| *Positive Emotions* |
| Happiness*(PA* = .96, k-α = .87) | Positive emotion (joy or happiness) or appeal to it expressed by the author, which is recognisable through linguistic expressions or word connotations. | n = 17 (5.66%) |
| Positive Emotions in general(*PA* = .96, *k-α* = .84) | A positive expression, if it has not already been coded under category happiness. This category cannot be directly assigned to happiness, but it has a clearly positive connotation. | n = 31 (10.33%) |
| *Negative Emotions* |
| Sadness(*PA* = 1.0, *k-α* = 1) | Sadness or appeal to it expressed by the author, which is recognisable through linguistic expressions or word connotations. | n = 7 (2.33%) |
| Fear/anxiety(*PA* = 0.93, *k-α* = 0.64)  | Fear/anxiety or appeal to it expressed by the author, which is recognisable through linguistic expressions or word connotations. | n = 17 (5.66%) |
| Anger, rage or fury(*PA* = .96, *k-α* = .89) | Anger, rage or fury or appeal to it expressed by the author, which is recognisable through linguistic expressions or word connotations. | n = 58 (19.33%) |
| Negative emotions in general(*PA* = .93, *k-α* = .87) | A negative expression, if it has not already been coded under category sadness, fear/anxiety, anger, rage & fury with a clearly negative connotation. | n = 163 (54.33%) |
| *Individual identity* |
| Goals and gratifications(*PA* = .96, *k-α* = .91) | Goals and gratifications expressed by the author (e.g. references to hopes, intentions, motivations for actions, rewards). | n = 84 (28%) |
| Rules and responsibility(*PA* = .96, *k-α* = .65) | Rules and responsibility expressed by the author (e.g. references to rules, laws, social norms, obligations towards an individual/group/community/society). | n = 17 (6.66%) |
| Feelings or emotions(*PA* = 1.0, *k-α* = 1.0) | The linking of expressed feelings or emotions with the self-disclosure of the author (e.g. references to fear, joy, anger and sadness).  | n = 14 (4.66%) |
| Understanding the world(*PA* = .96, *k-α* = .79) | The linking of the expressed understanding the world with the self-disclosure of the author (e.g. references to beliefs, ideologies and knowledge).  | n = 39 (13%) |
| Individual identity in general(*PA* = .93, *k-α* = .76) | An expression of individual identity. This category records statements on individual identity that have not already been covered more specifically elsewhere. | n = 72 (24%) |
| *Collective identity* |
| Goals and gratification(*PA* = .96, *k-α* = .65) | Collective identity in relation to goals and gratifications expressed by the author (e.g. references to the in-group, hopes, intentions, motivations for actions, rewards). | n = 13 (4.33%) |
| Rules and responsibility(*PA* = 1.0, *k-α* = 1) | Collective identity in relation to rules and responsibility expressed by the author (e.g. statements to the in-group and references to rules, laws, social norms, duties towards an individual/group/community/society). | n = 7 (2.33%) |
| Feelings or emotions(*PA* = 1.0, *k-α* = 1) | Linking of collective identity in relation to feelings or emotions with the self-disclosure of the author (e.g. statements to the in-group and references to fear, joy, anger and sadness). | n = 1 (0.33%) |
| Understanding the world(*PA* = 1.0, *k-α* = 1) | Linking of collective identity in relation to the understanding of the world expressed with the self-disclosure of the author (e.g. statements to the in-group and references to beliefs, ideologies and knowledge). | n = 7 (2.33%) |
| Physical characteristics (*PA* = 1.0, *k-α* = 1) | Collective identity in relation to physical characteristics expressed by the author (statements that serve to differentiate the author's own in-group from the out-group by e.g. hair colour, skin colour, body). | n = 2 (0.67%) |
| Social categories (*PA* = .80, *k-α* = .60) | Collective identity in relation to social categories expressed by the author (statements that serve to differentiate the author's own in-group from the out-group by e.g. origin, gender, age). | n = 139 (46.33%) |
| Positions of power (*PA* = .93, *k-α* = .84) | Collective identity in relation to positions of power expressed by the author (statements that serve to differentiate the author's own in-group from the out-group by e.g. social influence, media and/or financial influence). | n = 65 (21.67%) |
| Worldview (*PA* = .86, *k-α* = .61) | Collective identity in relation to worldview expressed by the author (statements that serve to differentiate the author's own in-group from the out-group by e.g. references of political ideologies & attitudes as well as the attribution of characteristics based on these). | n = 151 (50.33%) |
| Collective identity in general(*PA* = .96, *k-α* = .65) | An expression of collective identity. This category records statements on collective identity that have not already been covered more specifically elsewhere. | n = 20 (6.66%) |
| *Individual morality* |
| Care(*PA* = 1.0, *k-α* = 1.0) | The feeling to protect those in need, relieving suffering, sympathy with victims expressed by the author. | n = 47 (15.67%) |
| Harm (*PA* = 1.0, *k-α* = 1.0) | Anger or resentment towards the actors who are responsible for the harm/suffering caused expressed by the author. In difference to fairness and cheating, harm focuses on the suffering caused and the person/organisation responsible for it. | n = 20 (6.66%) |
| Fairness (*PA* = .96, *k-α* = .79) | Concepts of justice, cooperation and fair play expressed by the author. | n = 16 (5.33%) |
| Cheating(*PA* = 1.0, *k-α* = 1.0) | Breaking of a law/rule against the background of a sense of justice expressed by the author. | n =7 (2.33%) |
| Individual morality in general(*PA* = .96, *k-α* = .87) | An expression of individual morality. This category records statements on individual morality that have not already been covered more specifically elsewhere. | n = 44 (14.67%) |
| *Collective morality* |
| Loyalty (*PA* = .96, *k-α* = .84) | Expression of loyalty to one's group expressed by the author. | n = 23 (7.67%) |
| Betrayal (*PA* = .96, *k-α* = .64) | Violation of loyalty to one's in-group by third parties expressed by the author. | n = 30 (10%) |
| Authority(*PA* = 1.0, *k-α* = 1.0) | Respect, deference and obedience to hierarchical institutions expressed by the author (e.g. norms, behaviour, members of parliament, parents, police, etc.).  | n = 39 (13%) |
| Subversion(*PA* = 1.0, *k-α* = 1) | Disregard of concepts such as respect, deference and obedience towards hierarchical institutions expressed by the author. | n = 8 (2.67%) |
| Purity(*PA* = 1.0, *k-α* = 1) | References to physical and spiritual purity expressed by the author (e.g. religion, origin, social customs and rites, and social behaviour). | n = 3 (1%) |
| Degradation(*PA* = .96, *k-α* = -0.02)b | References to feelings of disgust, due to a violation of physical or/and mental purity expressed by the author. | n = 6 (2%) |
| Collective morality in general (*PA* = .96, *k-α* = .79) | An expression of collective morality. This category records statements on collective morality that have not already been covered more specifically elsewhere. | n = 59 (19.67%) |
| *Agency* |
| Group efficacy(*PA* = 1.0, *k-α* = 1) | References to the general field of activity of the group, calls for action or the belief in the group's ability to perform or assert itself in general expressed by the author. | n = 14 (4.67%) |
| Personal outcome expectancy(*PA* = 1.0, *k-α* = 1) | References to the effect of a specific action to achieve a certain outcome expressed by the author. | n = 3 (1%) |
| *a Note.* PA = average pairwise intracoder agreement using Holsti’s method, k-α= Krippendorff’s alphab A possible reason for the very different reliability coefficients could be very skewed distribution of this indicator in the data. The study by Feng (2014) empirically shows that Krippendorff’s alpha is not suitable for nominally scaled and skewed variables. This could explain the clear differences between the two reliability coefficients. |

# **Table 4:** *Sum indices of political motivations*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name of the Sum Indices** | **Indicators of sum indicesa** | **Descriptive Statisticsb** | **Theoretical minima and maximac** | **Krippendorff’s Alphad** |
| Positive emotions | Sum of two indicators: Happiness, positive emotions in general | *M = 0.16, MD = 0, SD = 0.36* | *Min = 0**Max = 1* | *0.85* |
| Negative emotion | Sum of four indicators: Sadness, Fear/anxiety, Anger, rage & fury, negative emotions in general | *M = 0.82, MD = 1, SD = 0.53* | *Min = 0**Max = 3* | *0.87* |
| Individual identity | Sum of five indicators: individual identity - goals and gratification, individual identity - rules and responsibility, individual identity - feelings or emotions, individual identity - understanding the world, individual identity in general | *M = 0.75, MD = 1, SD = 0.80* | *Min = 0* *Max = 4* | *0.84* |
| Collective identity | Sum of nine indicators: collective identity - goals and gratification, collective identity - rules and responsibility, collective identity - feelings or emotions, collective identity - understanding the world, collective identity - physical characteristics, collective identity - social categories, collective identity - positions of power, collective identity – worldview, collective identity in general | *M = 1.35, MD = 1, SD = 0.91* | *Min = 0**Max = 8* | *0.78* |
| Individual morality | Sum of five indicators: care, harm, fairness, cheating, individual morality in general | *M = 0.44, MD = 0, SD = 0.62* | *Min = 0**Max = 4* | *0.92* |
| Collective morality | Sum of seven indicators: loyalty, betrayal, authority, subversion, purity, degradation, collective morality in general | *M = 0.56, MD = 0, SD = 0.69* | *Min = 0**Max = 6* | *0.79* |
| Agency | Sum of two indicators: group efficacy, personal outcome expectancy | *M = 0.06, MD = 0, SD = 0.23* | *Min = 0**Max = 2* | *1.00* |
| a The formation of ratio indices was not necessary due to the subsequent z-standardization of the index values, as the standardization compensates for differences in the use of different scales (Schendera, 2010) b *Note.* M = mean, MD = median, SD = standard deviationc Due to the coding instructions, the theoretical maximum is smaller than the number of variables in the index (for example, the variable "positive emotions" was only coded if the more specific variable "emotion happiness" could not be coded).d Krippendorff's alpha was calculated at the level of the index with a comparison of the agreement in the coding of the indicators. |

# **Table 5:** *Test of Mojena*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Merger step | 1 | … | 292 | 293 | 294 | 295 | 296 | 297 | 298 |
| Number of clusters | 300 | … | 8 | 7 | 6 | 5 | 4 | 3 | 2 |
| Fusion coefficient | 0 | … | 802,8 | 852,8 | 922,2 | 1017,6 | 1192,9 | 1433,9 | 1736,1 |
| Standardised fusion coefficients | 0,42 | … | 2,80 | 3,00 | 3,28 | 3,66 | 4,37 | 5,33 | 6,55 |
| *Note.* The starting point for the test of Mojena are the standardised fusion coefficients per fusion stage. The largest number of groups at which a threshold of the standardised fusion coefficient is exceeded for the first time is considered to be an indication of a good cluster solution (Mojena, 1977). |

# **Table 6:** *Validation of the cluster solution by means of discriminant analysis*

|  |
| --- |
| **Predicted type of user commentsa** |
|   |   | Cluster 1 | Cluster 2 | Cluster 3 | Cluster 4 | Cluster 5 | Cluster 6 | Overall |
| Quantity | 1 | 44 | 0 | 0 | 0 | 0 | 0 | 44 |
|   | 2 | 0 | 72 | 0 | 1 | 1 | 0 | 74 |
|   | 3 | 4 | 4 | 0 | 5 | 3 | 1 | 17 |
|   | 4 | 0 | 1 | 0 | 69 | 0 | 2 | 72 |
|   | 5 | 0 | 0 | 0 | 0 | 47 | 5 | 52 |
|   | 6 | 0 | 0 | 0 | 1 | 0 | 40 | 41 |
| Percent | 1 | 100 | 0 | 0 | 0 | 0 | 0 | 100 |
|   | 2 | 0 | 87.3 | 0 | 1,4 | 1,4 | 0 | 100 |
|   | 3 | 23,5 | 23,5 | 0 | 29,4 | 17,6 | 5,9 | 100 |
|   | 4 | 0 | 1,4 | 0 | 95,8 | 0 | 2,8 | 100 |
|   | 5 | 0 | 0 | 0 | 0 | 90,4 | 9,6 | 100 |
|   | 6 | 0 | 0 | 0 | 2,4 | 0 | 97,6 | 100 |
| a 90,7% of the originally grouped cases were correctly classified. |
| **Table 7:** *Homogeneity and characterisation of types of user comments* |

|  |
| --- |
| **Types of user comments** |
|  | **Moral-friendly type of user comments** (N = 44) | **Objective type of user comments** (N = 74) | **Emotional-moral-believing type of user comments** (N = 17) | **Angry-left-liberal type of user comments** (N = 72) | **Angry-conservative type of user comments** (N = 52) | **Angry-lone-fighter type of user comments** (N = 41) |
| **Motivation-index** | Fa | tb | Fa | tb | Fa | tb | Fa | tb | Fa | tb | Fa | tb |
| Positive emotions | 0 | 2.28 | 0 | -0.43 | 1.41 | 0.20 | 0 | -0.43 | 0 | -0.43 | 0 | -0.43 |
| Negative emotions | 0.58 | -1.14 | 0.87 | -0.46 | 0.82 | 0.12 | 0.48 | 0.44 | 0.25 | 0.48 | 0.80 | 061 |
| Individual identity | 0.82 | -0.06 | 0.59 | -0.24 | 0.77 | -0.20 | 0.88 | -0.07 | 0.68 | -0.40 | 0.82 | 1.23 |
| Collective identity | 0.97 | -0.05 | 0.73 | -0.50 | 1.12 | -0.12 | 0.86 | 0.25 | 0.76 | 0.77 | 0.56 | -0.40 |
| Individual morality | 1.10 | 0.19 | 0.19 | -0.58 | 0.93 | 0.31 | 0.51 | 1.23 | 0 | -0.71 | 0.22 | -0.55 |
| Collective morality | 0.44 | -0.38 | 0.23 | -0.67 | 0.50 | -0.29 | 0.54 | -0.40 | 0.59 | 1.04 | 0.58 | 1.12 |
| Agency | 0 | -0.24 | 0 | -0.24 | 0 | 4.07 | 0 | -0.24 | 0 | -0.24 | 0 | -0.24 |
| a F-value: The smaller the F-value, the lower the variance of this variable in a group compared to the overall population (Backhaus, 2016).b t-score:Negative t-values indicate that a variable is underrepresented in the group compared to the overall population (the reverse is true for positive values) (Backhaus, 2016) |

# **Figure 1:** *Elbow criteria*



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