APPENDIX

Appendix A

Coding instructions for content analysis

The question wording for the variable used to measure negativity toward the EU in media content was as follows: *What is the overall evaluation of the EU, its institutions, and its politicians?*

The instructions were as follows: *This is an overarching evaluation of all EU-related institutions and individuals in the entire news items. 'The EU' here refers to any EU institution (the parliament, the European Central Bank, the commission, etc.). Also code if synonyms are used which clearly refer to the EU as such, e.g., "Europe" (when in fact the EU is meant / but not if Europe is only referred to as a geographical entity) or "Brussels" (when in fact the EU is meant). Expressions such as "EUmoney" or "EU-budget" should be also coded here (and policies potentially also in V18). 0 = EU and/or EU institutions mentioned but not evaluated 1 = (rather) negative 2 = balanced/mixed 3 = (rather) positive*

Note I: Evaluations should be positive/negative from the perspective of the EU. So: is the EU performing well/poorly, does the EU find itself in good/bad circumstances?

Note II: If the article is not about the EU or any of its institutions, stop coding it and let us know.

Note III: This evaluation can be the same as the actor evaluation of the EU, but it can also be different. It is the same if the article only mentions the EU. However, if there are multiple EU institutions / individuals mentioned, V9 concern the evaluation of them *all* in the entire article.

Examples of when the EU is mentioned but NOT evaluated (Code: 0):

"The EU signed an agreement with the US"

"The Lisbon Treaty tries to make the EU become more democratic."

"The EU is negotiating about emission rights."

"ECB's guidelines on bank debt apply from April 1st"

"The European Commission is proposing to reform the EU's common visa policy"

Examples of positive/negative/mixed tone:

"The EU is *failing* to push industries towards a cleaner production." (Code: 1 negative)

"The EU took a step towards *improving* the democratic structure" (Code: 3 positive)

"The EU functions *well*" (Code: 3 positive)

"*Breakthrough* in EU defense policy, but concrete plans still *missing*." (Code: 2 mixed)

"The EU leaders were *satisfied* with their decisiveness during the Summit." (Code 3: positive)

"The European Parliament had a *breakthrough*" (Code 3: positive)

Coder training and inter-coder reliability assessment

In total, 37 coders were hired to conduct the coding. All coders were native speakers of the language they were coding in, albeit they were all trained in English (except of two additional Dutch coders, see below). The coder training happened in three separate subprojects, due to the different starting points of the research project across these three subprojects, including three sets of countries (see below). In each subproject, three coder training sessions were held, which lasted three hours each. The coder training sessions were spread over a period of approximately four weeks with appropriate intervals for practice coding and reliability tests in between

individual sessions. Two members from the research project team served as coordinators and instructors of the coder trainings.

Inter-coder reliability based on Fretwurst's Lotus was assessed separately in the three separate subprojects. Subproject 1 (only including the Netherlands and comprising 10 coders) reached a Lotus score of 0.81, subproject 2 (Denmark, Germany, Hungary, Spain and comprising 15 coders) a Lotus score of 0.77 and subproject 3 (Czech Republic, France, Greece, Poland, Sweden and comprising 10 coders) a Lotus score of 0.73. Here, we note that due to the long media coverage period and related long coding process in subproject 1 in the Netherlands, the latter lasted from March 2018 until November 2019, two additional coders were recruited in May 2019 for the final phase to replace retired coders.

Table A1: Overview of included media outlets per country

Country	Media type	Outlet
DE	Newspaper	SZ
DE	Newspaper	FAZ
DE	TV news	RTL Aktuell
DE	TV news	Tagesschau
DE	Online	bild.de
DE	Online	SPON
DE	Online	focus.de
DK	Newspaper	Jyllands Posten
DK	Newspaper	Politiken
DK	TV news	DR news
DK	Online	DR news online
DK	Online	Ekstra Bladet online
ES	Newspaper	El Pais
ES	Newspaper	El mundo
ES	TV news	TVE news
ES	TV news	Antena 3 news
ES	Online	El Pais online
ES	Online	El mundo online
FR	Newspaper	Le Figaro
FR	Newspaper	Le Monde
FR	TV news	France 2 news[1]
FR	Online	France info online
FR	Online	20 minutes online
GR	Newspaper	Kathimerini
GR	Newspaper	Ta Nea
GR	TV news	SKAI TV news
GR	TV news	ERT news
GR	Online	In.gr
GR	Online	Newsbomb.gr
HU	Newspaper	Nepszava
HU	TV news	M1 news
HU	TV news	RTL Klub news
HU	Online	Origo.hu
HU	Online	Index.hu
NL	Newspaper	AD[2]
NL	Newspaper	Telegraaf
NL	Newspaper	Trouw

---

[1] N=12, we still kept this source as we otherwise have no TV news coverage in France.
[2] In the Netherlands, and due to the higher number of covered outlets, several outlets have a smaller N, but always N>20.

NL	Newspaper	Volkskrant
NL	Newspaper	NRC Handelsblad
NL	TV news	NOS 8uur journaal[2]
NL	TV news	NOS Nieuwsuur[2]
NL	TV news	RTL Nieuws[2]
NL	Online	ad.nl
NL	Online	nos.nl
NL	Online	nrc.nl
NL	Online	nu.nl
NL	Online	telegraaf.nl
NL	Online	trouw.nl[2]
NL	Online	volkskrant.nl[2]
PL	Newspaper	Gazeta Wyborczka
PL	TV news	TVP news
PL	Online	Onet.pl
PL	Online	WP.pl
SE	Newspaper	Expressen
SE	Newspaper	Dagens Nyheter
SE	Newspaper	Svenska Dagbladet
SE	TV news	SVT news[3]
SE	Online	Expressen online
SE	Online	Aftonbladet online

---

[3] N=20, we still kept this source as we otherwise have no TV news coverage in Sweden.

Table A2: Descriptive information about content data

Number of news items coded for media exposure variable in study 1 (per country)

Country	N of news items	% of negative items	% of positive items
DE	560	18.2	12.9
DK	332	33.7	24.1
ES	506	20.4	10.3
FR	517	5.4	5.2
GR	475	7.0	4.4
HU	407	37.1	7.1
NL	612	29.1	5.7
PL	428	9.1	7.5
SE	396	6.6	3.5

Number of news items coded for media exposure variables in study 2 (per wave)

Wave	Media type	N of news items	% of negative items	% of positive items
2	Newspaper	130	20.7	31.5
	TV news	27	25.9	3.7
	Online news	240	18.3	10.8
5	Newspaper	456	22.3	16.0
	TV news	123	17.9	4.1
	Online news	666	19.4	5.1
7	Newspaper	70	40.0	20.0
	TV news	18	44.4	11.1
	Online news	100	31.0	7.0

Table A3: Descriptive information for the dependent variable measuring populist attitudes

Study 1:

Country	Cronbach's alpha	Mean	SD
DE	0.84	4.73	1.40
DK	0.78	3.33	1.39
ES	0.73	4.70	1.19
FR	0.82	4.68	1.31
GR	0.79	5.00	1.23
HU	0.71	5.13	1.27
NL	0.80	3.75	1.27
PL	0.72	4.89	1.23
SE	0.84	3.64	1.52

Study 2 (the Netherlands):

Wave	Cronbach's alpha	Mean	SD
2	0.83	3.84	1.39
5	0.82	3.65	1.31
7	0.80	3.75	1.27

Table A4. Regression result with absolute exposure to negativity share

	DV: populist attitudes	
	(1)	(2)
Media exposure *absolute*	-0.106***	-0.095***
(linked w content data)	(0.017)	(0.019)
Controls		
female	0.029	0.023
	(0.034)	(0.024)
age	-0.001	0.001
	(0.001)	(0.001)
education	-0.112***	-0.026***
	(0.010)	(0.007)
country-fixed effects	✓	✓
General media exposure		
Newspaper		0.034*
		(0.013)
TV news		-0.016
		(0.012)
Online news		0.020*
		(0.008)
Social media		0.016
		(0.015)
Populist attitudes t-1		0.626***
		(0.009)
Left-right		-0.029
		(0.018)
Left-right^2		0.002
		(0.002)
EP party voting (ref. non-voter)		
EPP		-0.032
		(0.041)
S&D		-0.075
		(0.042)
Renew		-0.064
		(0.046)
Greens-EFA		-0.161**
		(0.057)
ID		0.238***
		(0.061)
ECR		0.022
		(0.053)
GUE-NGL		0.024
		(0.051)
Other		0.068
		(0.052)
Satisfaction democracy		-0.076***
		(0.009)
Constant	4.200***	1.815***
	(0.097)	(0.103)
Observations	5910	5910
R^2	0.209	0.603

Standard errors in parentheses,; $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A5: Regression results with EU trust as DV across nine countries

	DV: EU trust			
	(1)	(2)	(3)	(4)
Media exposure	0.247***	0.016		
(not linked)	(0.019)	(0.019)		
Media exposure			0.018	-0.009
(linked w content data)			(0.019)	(0.012)
Controls				
female	0.155***	0.023	0.121**	0.021
	(0.038)	(0.022)	(0.038)	(0.022)
age	0.003*	0.000	0.005***	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
education	0.093***	0.017**	0.103***	0.018**
	(0.011)	(0.006)	(0.011)	(0.006)
country-fixed effects	✓	✓	✓	✓
General media exposure				
Newspaper		0.011		0.015
		(0.012)		(0.012)
TV news		0.015		0.020
		(0.011)		(0.010)
Online news		0.018*		0.021**
		(0.008)		(0.007)
Social media		0.036**		0.035**
		(0.013)		(0.013)
EU trust t-1		0.638***		0.637***
		(0.010)		(0.010)
Left-right		0.017		0.016
		(0.016)		(0.016)
Left-right^2		-0.002		-0.002
		(0.001)		(0.001)
EP party voting (ref. non-voter)				
EPP		0.218***		0.222***
		(0.038)		(0.038)
S&D		0.271***		0.274***
		(0.039)		(0.039)
Renew		0.320***		0.323***
		(0.042)		(0.042)
Greens-EFA		0.275***		0.281***
		(0.052)		(0.052)
ID		-0.173**		-0.173**
		(0.056)		(0.056)
ECR		0.007		0.012
		(0.048)		(0.048)
GUE-NGL		0.002		0.005
		(0.047)		(0.047)
Other		-0.064		-0.061
		(0.047)		(0.047)
Satisfaction w democracy		0.150***		0.150***
		(0.010)		(0.010)
Constant	-1.250***	-0.955***	-1.324***	-0.977***
	(0.109)	(0.090)	(0.111)	(0.088)
Observations	5910	5910	5910	5910
R^2	0.086	0.696	0.061	0.696

Standard errors in parentheses,; $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A6: Regression results with EU performance as DV across nine countries

	DV: EU performance			
	(1)	(2)	(3)	(4)
Media exposure	0.199***	0.029		
(not linked)	(0.017)	(0.018)		
Media exposure			0.004	-0.021
(linked w content data)			(0.017)	(0.011)
Controls				
female	0.151***	0.009	0.123***	0.007
	(0.034)	(0.021)	(0.034)	(0.021)
age	-0.000	-0.002*	0.001	-0.002*
	(0.001)	(0.001)	(0.001)	(0.001)
education	0.050***	-0.004	0.059***	-0.002
	(0.010)	(0.006)	(0.010)	(0.006)
country-fixed effects	✓	✓	✓	✓
General media exposure				
Newspaper		0.009		0.016
		(0.012)		(0.011)
TV news		0.016		0.026*
		(0.011)		(0.010)
Online news		0.005		0.011
		(0.008)		(0.007)
Social media		0.039**		0.037**
		(0.013)		(0.013)
EU performance t-1		0.567***		0.565***
		(0.011)		(0.011)
Left-right		0.023		0.022
		(0.016)		(0.016)
Left-right^2		-0.002		-0.001
		(0.001)		(0.001)
EP party voting (ref. non-voter)				
EPP		0.137***		0.145***
		(0.036)		(0.036)
S&D		0.208***		0.214***
		(0.038)		(0.038)
Renew		0.215***		0.222***
		(0.040)		(0.040)
Greens-EFA		0.218***		0.232***
		(0.051)		(0.051)
ID		-0.171**		-0.171**
		(0.054)		(0.054)
ECR		-0.067		-0.058
		(0.047)		(0.047)
GUE-NGL		0.012		0.017
		(0.045)		(0.045)
Other		-0.102*		-0.096*
		(0.046)		(0.046)
Satisfaction w democracy		0.176***		0.176***
		(0.010)		(0.010)
Constant	-0.788***	-0.832***	-0.851***	-0.877***
	(0.097)	(0.087)	(0.098)	(0.086)
Observations	5910	5910	5910	5910
R^2	0.078	0.634	0.057	0.634

Standard errors in parentheses,; $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A7: Regression results with EU populist attitudes (Netherlands)

	DV: EU populist attitudes				DV: change in EU populist attitudes	
	(1)	(2)	(3)	(4)	(5)	(6)
	Wave 2	Wave 5	Wave 2	Wave 5	W2 → 5	W2 → 5
Newspaper exp	-0.014	0.017			-0.025	
	(0.037)	(0.040)			(0.048)	
TV news exp	0.075*	0.016			-0.017	
	(0.033)	(0.035)			(0.042)	
Online news exp	0.033	-0.007			0.025	
	(0.025)	(0.027)			(0.033)	
Newspaper exp (linked w content)			-0.241	0.201		-0.083
			(0.224)	(0.194)		(0.234)
TV news exp (linked w content)			0.540**	0.352		0.487
			(0.183)	(0.356)		(0.429)
Online news exp (linked w content)			-0.430	-0.574*		-0.089
			(0.353)	(0.292)		(0.352)
Social media exp	0.099***	0.068*	0.125***	0.078*	-0.026	-0.022
	(0.029)	(0.034)	(0.028)	(0.033)	(0.041)	(0.039)
Controls						
female	-0.092*	-0.012	-0.107*	-0.019	0.000	-0.003
	(0.044)	(0.045)	(0.044)	(0.045)	(0.054)	(0.054)
age	0.003*	0.000	0.005***	0.000	-0.001	-0.001
	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)
Education	-0.098***	-0.077***	-0.089***	-0.074***	-0.015	-0.014
	(0.012)	(0.013)	(0.012)	(0.013)	(0.015)	(0.015)
Populist attitudes t-1		0.430***		0.428***		
		(0.021)		(0.021)		
Left-right	-0.085	0.027	-0.093*	0.021	0.027	0.069
	(0.044)	(0.046)	(0.044)	(0.046)	(0.046)	(0.056)
Left-right^2	0.011**	0.001	0.012**	0.001	0.001	-0.004
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)
EP party voting (ref. non-voter)						
EPP	-0.141	-0.163	-0.108	-0.157	-0.018	-0.021
	(0.089)	(0.092)	(0.089)	(0.092)	(0.111)	(0.111)
S&D	-0.464***	-0.240*	-0.421***	-0.233*	0.124	0.119
	(0.103)	(0.104)	(0.103)	(0.104)	(0.124)	(0.124)
Renew	-0.477***	-0.230**	-0.452***	-0.221**	0.013	0.017
	(0.067)	(0.074)	(0.067)	(0.073)	(0.088)	(0.088)
Greens-EFA	-0.408***	-0.346***	-0.376***	-0.342***	-0.203	-0.203
	(0.098)	(0.099)	(0.099)	(0.099)	(0.120)	(0.120)
ID	0.410***	0.109	0.427***	0.112	-0.031	-0.032
	(0.081)	(0.084)	(0.081)	(0.084)	(0.101)	(0.101)
ECR	0.030	0.106	0.062	0.119	0.082	0.084
	(0.085)	(0.081)	(0.085)	(0.081)	(0.097)	(0.098)
GUE-NGL	0.051	0.028	0.074	0.038	0.093	0.093
	(0.085)	(0.086)	(0.085)	(0.086)	(0.103)	(0.103)
Other	0.010	-0.560	0.076	-0.588	0.390	0.390
	(0.502)	(0.517)	(0.501)	(0.516)	(0.621)	(0.621)
Satisfaction w demo.	-0.336***	-0.249***	-0.333***	-0.248***	-0.002	-0.002
	(0.017)	(0.020)	(0.016)	(0.020)	(0.021)	(0.021)
Constant	5.708***	3.177***	5.616***	3.194***	-0.263	-0.280
	(0.162)	(0.213)	(0.165)	(0.214)	(0.206)	(0.207)
Observations	2648	1637	2648	1637	1637	1637
R^2	0.325	0.550	0.326	0.551	0.012	0.012

Standard errors in parentheses; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$