Hierarchy position & personality predict politicians' choice of information sources

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Method & Analysis

Detailed Statistical Methodology & Findings

To test the relationship between level in the political hierarchy and personality on the one hand and type of information sources on the other hand, we first combined the different information sources in three higher order categories: media sources (that is, traditional media + social media), political sources (that is, my party + other politicians from your own party + personal contacts), and neutral sources (that is, civil servants + parliamentary services + scientific institutions). Subsequently, because each politician is nested within a political party, we tested a series of ordinal multilevel regression models with individual politicians at the first level and political parties at the second level using the clmm command of the ordinal package in R (Christensen, 2019). In those models, the number of times each category of information sources was selected was predicted using personality, level in the political hierarchy, national or regional level, gender, and experience. Following Gerber et al. (2011) and based on previous research showing their association with media choice, gender and experience were entered as control variables in our models. We also controlled for national versus regional level in our models to account for the specificity of the Belgian political system and the effect this potentially has on the types of information sources politicians consult.

Table S1. Comparison between sample & full population

Federal level

Characteristic	Sample	Population
Political party		
CD&V		
%	14.6	12.3
n	16	21
Ecolo		
%	2.6	4.7
n	3	8
FDP		
%	1.7	1.2
n	2	2
Groen		
%	4.4	3.5
n	5	6
MR		
%	13.3	15.8
n	15	27
N-VA		
%	26.5	22.2
n	30	38
Open VLD		
%	9.7	9.9
n	11	17
PP		
%	0.9	1.2
n	1	2
PS		
%	10.6	13.4
N	12	23
PTB-GO!		
%	0	1.2
n	0	2
Vlaams Belang		
%	2.6	1.7
N	3	3
cdH		
%	4.4	5.3
n	5	9
sp.a		
%	8.8	7.6
n	10	13
Gender: Female		
%	34	37
n	38	64
Elite: 1		
%	27	34
n	31	58
Mean age (years)	48	48
Mean experience (years)	8.5	8.8
Total (N)	113	171

Flemish Regional level

Characteristic	Sample	Population
Political party		
CD&V		
%	21.7	22.6
n	23	30
Groen		
%	8.5	7.5
n	9	10
N-VA		
%	33	35.3
n	35	47
Open VLD		
%	17.9	15.8
n	19	21
UF		
%	0	0.7
n	0	1
sp.a		
%	14.1	13.5
n	15	18
Vlaams Belang		
%	4.7	4.5
n	5	6
Gender: Female		
%	42	44
n	44%	59
Elite: 1		
%	20	23
n	21	30
Mean age (years)	45	46
Mean experience (years)	7.1	7.5
Total (N)	106	133

Walloon Regional and French Community level

Characteristic	Sample	Population
Political party		
Ecolo		
%	10	5.5
n	5	6
FDF		
%	6	2.7
n	3	3
MR		
%	26	28.4
n	13	31
PP		
%	0	0.9
n	0	1
PS		
%	36	42.2
n	18	46
PTB-GO!		
%	0	1.8
n	0	2
cdH		
%	22	18.3
n	11	20
Gender: Female		
%	38	39
n	19	43
Elite: 1		
%	16	26
n	8	28
Mean age (years)	48	48
Mean experience (years)	7.2	7.3
Total (N)	50	109

Note. CD&V = Christen-Democratisch en Vlaams; MR = Mouvement Réformateur; N-VA = Nieuw-Vlaamse Alliantie; Open VLD = Open Vlaamse Liberalen en Democraten; PP = Parti populaire; PS = Parti socialiste; PTB-GO! = Parti du travail de Belgique; cdH = Centre démocrate humaniste; sp.a = Socialistische Partij Anders; UF = Union des Francophones; FDF = Front démocratique des Francophones.

Intraclass correlation coefficients revealed that the political party a politician belongs to explains little variation in the selection of media sources (4.40% explained), political sources (<.01% explained), and neutral sources (<.01% explained). Hence, the lion's share of the variation is explained by factors other than a politician's party. Most important, Table S2 shows that Extraversion and Agreeableness play important roles in predicting which information sources politicians use for their political activities, in the sense that more extraverted and more agreeable politicians rely more on neutral sources and less on endogenous political sources. In particular, for every one unit increase in Extraversion or Agreeableness, the odds of being more likely to rely on neutral sources is multiplied by 1.63 and 1.40 times, respectively. For endogenous political sources, every one-unit increase in Extraversion or Agreeableness decreases the odds by a factor of 0.59 and 0.63, respectively. Furthermore, we also find a relationship with Openness to Experience, as more open politicians tend to make less use of media sources (a one unit increase in Openness to Experience is associated with a decrease of the odds by a factor of 0.60). Regarding level in the political hierarchy, elite politicians turn out to rely more on neutral sources than do backbenchers. In particular, for elite politicians, the odds of being more likely to rely on neutral sources is 2.65 times that of backbenchers.

For media sources and endogenous political sources, no differences were found between both groups.

In a subsequent analysis, we looked into individual information sources. However, binomial multilevel regression models resulted in either very small random intercept variances (meaning that there were few differences in the intercepts of the respective political parties) or convergence issues (meaning that the random intercept model was probably too complex for the data). We therefore tested these models using traditional (and not multilevel) binomial regression models using the glm function in R. (See Table S3.)

Looking at the use of individual sources of information reveals that the negative relationship between political sources on the one hand and Extraversion and Agreeableness on the other hand is primarily due to a negative association with the politicians' use of their own party as a source of information. In particular, every one-unit increase in Extraversion or Agreeableness decreases the odds of a politician using their own party as a source of information by a factor of 0.60 and 0.65, respectively. The positive relationship with neutral sources is driven by the fact that politicians high on Extraversion more often consult scientific institutions (a one-unit increase in Extraversion is associated

Table S2. Ordinal multilevel regression models explaining politicians' use of different types of information sources

Characteristic	Media			Political sources			Neutral sources		
	Value	SE	p	Value	SE	p	Value	SE	p
Extraversion	.08	.22	.734	**−.53**	**.22**	**.017**	**.49**	**.23**	**.029**
Agreeableness	−.13	.18	.472	**−.47**	**0.17**	**.007**	**.34**	**.17**	**.048**
Conscientiousness	.04	.20	.862	.04	.16	.824	−.10	.17	.556
Neuroticism	−.01	.23	.974	−.32	.19	.105	.17	.20	.386
Openness to Experience	**−.51**	**.23**	**.024**	−.10	.18	.602	.14	.19	.466
National (0) versus regional (1)	.13	.29	.645	−.47	.28	.100	.35	.29	.235
Elite	−.15	.36	.677	.14	.35	.696	**.97**	**.36**	**.006**
Gender	.14	.29	.633	.05	.29	.874	.13	.30	.659
Experience	**.04**	**.02**	**.042**	**−.03**	.02	.108	−.03	.02	.190
0|1	−1.59	2.27		−6.41	2.05		5.30	2.10	
1|2	1.66	2.34		−2.49	2.05		8.41	2.15	

Table S3. Binomial regression models explaining the use of specific sources of information

Characteristic	Mass media		Social media		My party		Politicians from own party		Scientific institutions		Parliamentary services	
	Coef	p	Coef	p	Coef	p	Coef	p	Coef	p	Coef	p
Intercept	0.63	.751	1.74	.622	**6.37**	**.002**	0.58	.907	**−5.43**	**.016**	−6.70	.058
Extraversion	−0.02	.936	0.40	.260	**−0.51**	**.023**	−0.22	.692	**0.49**	**.043**	0.37	.348
Agreeableness	−0.02	.928	−0.53	.084	**−0.44**	**.013**	−0.65	.152	0.23	.209	**0.58**	**.043**
Conscientiousness	0.09	.600	−0.23	.473	−0.04	.805	0.40	.314	0.08	.652	−0.28	.312
Neuroticism	0.01	.946	−0.14	.715	−0.26	.189	−0.50	.285	0.16	.462	0.06	.849
Openness to Experience	**−0.40**	**.038**	−0.66	.056	−0.14	.469	0.10	.825	0.04	.842	0.29	.358
National (0) versus regional (1)	0.07	.816	0.41	.454	−0.52	.072	0.29	.693	0.39	.209	0.03	.960
Elite	−0.34	.355	0.29	.642	0.22	.549	−1.15	.314	**1.25**	**<.001**	−0.66	.421
Gender	0.18	.534	−0.34	.552	0.10	.734	−0.41	.575	−0.10	.761	0.68	.170
Experience	0.04	.093	0.04	.265	−0.04	.101	−0.00	.985	−0.02	.341	−0.06	.222

Characteristic	Industry associations		Federal bureaucrats		Citizens		Personal contacts		Interest groups	
	Coef	p	Coef	p	Coef	p	Coef	p	Coef	p
Intercept	**−5.77**	**.008**	−0.57	.881	1.52	.595	0.77	.696	−0.94	.657
Extraversion	−0.25	.276	0.06	.886	−0.16	.611	0.04	.835	−0.21	.357
Agreeableness	0.17	.361	0.18	.540	0.17	.490	−0.21	.218	0.09	.620
Conscientiousness	−0.12	.495	0.25	.415	−0.17	.506	0.11	.514	0.04	.810
Neuroticism	**0.74**	**<.001**	−0.25	.523	−0.48	.110	0.08	.678	−0.26	.206
Openness to Experience	**0.61**	**.003**	−0.43	.162	−0.10	.707	−0.08	.651	**0.40**	**.049**
National (0) versus regional (1)	0.55	.074	**−2.51**	**<.001**	−0.21	.610	0.07	.810	0.11	.708
Elite	−0.27	.485	0.35	.537	−1.19	.083	0.00	.989	−0.14	.704
Gender	**0.97**	**.002**	−1.05	.089	−0.61	.187	−0.22	.452	−0.27	.388
Experience	−0.00	.997	0.01	.757	0.02	.621	−0.00	.914	0.01	.759

with an increase of the odds by a factor of 1.63), whereas politicians high on Agreeableness make more use of the parliamentary services (a one-unit increase in Agreeableness is associated with an increase of the odds by a factor of 1.79). Regarding Openness to Experience, the negative relationship with media sources turns out to be primarily due to less reliance on traditional (and only marginally less reliance on social media) sources. In particular, every one-unit increase in Openness to Experience decreases the odds of relying on traditional sources by a factor of 0.67 (and on social media by a factor of 0.52). Moreover, politicians high on Openness to Experience more often consult industry associations (a one-unit increase increases the odds by a factor of 1.83) and interest groups (a one-unit increase increases the odds by a factor of 1.49) than do politicians low on Openness to Experience. Finally, among the neutral sources, elite politicians rely more on scientific institutions than do backbenchers: For elite politicians, the odds of being more likely to rely on scientific institutions is 3.49 times that of backbenchers.

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