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**Working Paper**

## When Confirmation Bias Outweighs Expertise: A Factorial Survey On Credibility Judgments Of Polarizing Covid-19 News

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## Appendix

When Confirmation Bias Outweighs Expertise: A Factorial Survey on Credibility Judgments of Polarizing COVID-19 News (Sandra Walzenbach and Thomas Hinz)

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### A) Question Wording (translated to English)

#### A.1 Vignettes

##### Intro

“You will now see three different media contents. They all have something to do with Covid-19, but originate from different sources, where they were published during the Corona pandemic - like this or in a similar form. We are interested in how credible you think these texts are.”

##### Stimuli on Masks

Example Vignettes on Masks by Ideology, authored by a male blog author and reference to a study with numbers (layout as presented in the actual survey)

###### **Farewell to the mask: a long-overdue goodbye**

*By Peter Müller, blog author*

Recently, the nationwide rules on mandatory mask-wearing in stores, restaurants, and schools were lifted. Rightly so? In fact, mask requirements impose considerable restrictions on individuals. At the same time, it is questionable whether masks really curb the pandemic. A recent study shows that even the inconvenient FFP2 masks reduce the risk of infection only slightly—namely to 80%. This is because the mask must be properly fitted and sit tightly on the face. In addition, used masks should not be touched, as viruses and bacteria can otherwise be transmitted. Against this background, it was high time that policymakers said goodbye to the mask.

[ideology: denier]

###### **Farewell to the mask: the time has come**

*By Peter Müller, blog author*

Recently, the nationwide rules on mandatory mask-wearing in stores, restaurants, and schools were lifted. Rightly so? In fact, the mask mandate is a measure that, on the one hand, imposes restrictions on individuals, but on the other hand, helps to curb the pandemic. A recent study shows that particularly FFP2 masks can greatly reduce the risk of infection—namely to about 10%. The problem is that the mask must fit well and be changed regularly, which is inconvenient in everyday life. All in all, it is understandable that policymakers no longer wish to burden people with the mask.

[ideology: middle]

**Farewell to the mask: a premature goodbye**

*By Peter Müller, blog author*

Recently, the nationwide rules on mandatory mask-wearing in stores, restaurants, and schools were lifted. Rightly so? In fact, the mask mandate is a measure that imposes no significant restrictions on individuals and is extremely successful in curbing the pandemic. A recent study shows that particularly FFP2 masks provide almost complete protection against infection, as they reduce the risk of transmission drastically—to just 0.1%. Against this background, it is surprising that policymakers are abandoning the mask so quickly.

[ideology: mainstream]

**Stimuli on Vaccines**

Example Vignettes on Vaccines by Ideology, authored by a female scientist and reference to a study with numbers (layout as presented in the actual survey)

**The Corona vaccine: worse than the disease**

*By Daniela Schneider, Professor of Virology*

The Corona vaccines were administered to many people worldwide in the shortest possible time. According to a recent study, these vaccinations temporarily provide some protection against severe illness, but above all they dramatically increase the risk of thrombosis and inflammation of the heart muscle by 900%. For elderly people they can at times even be fatal. The vaccine received fast-track approval without clear quality standards. With regard to long-term side effects, we are completely in the dark. The vaccination kills more people than it saves.

[ideology: denier]

**The Corona vaccine: a conclusion**

*By Daniela Schneider, Professor of Virology*

The Corona vaccines were administered to many people worldwide in the shortest possible time. According to a recent study, these vaccinations offer some protection against severe illness: they reduce the likelihood of becoming seriously ill by 60%. However, the risk of becoming infected oneself or transmitting the virus to others, is at best reduced temporarily. The vaccine went through an accelerated approval process while adhering to quality standards. Because more serious side effects are rare, they could only be identified after many people had already been vaccinated. Despite noteworthy risks, the overall benefits of vaccination cannot be denied.

[ideology: middle]

### **The Corona vaccine: a success story**

*By Daniela Schneider, Professor of Virology*

The Corona vaccines were administered to many people worldwide in the shortest possible time. According to a recent study, these vaccinations offer almost complete protection against severe illness: they reduce the likelihood of becoming seriously ill by 90%. In addition, they initially lower the risk of becoming infected oneself or transmitting the virus to others considerably. The vaccine went through an accelerated approval process while still meeting the usual quality standards. Apart from short-term immune responses, long-term side effects are very rare. The benefits of vaccination therefore far outweigh its risks.

[ideology: mainstream]

### **A.2 Direct questions on opinions regarding vignette topics: risk, mask, vax**

- In general, how dangerous do you think the corona virus is?
- How much sense do you think it would make to have mandatory masks in stores, restaurants and schools at the moment (a regulation like before April 2)?
- How useful do you think the corona vaccination is?

[5-point ordinal response scales from “not at all” to “very”]

### **A.3 Decision making: gut feeling / evidence / relative truths**

How much do you agree to the following statements?

- I trust my gut feeling to decide what is true and what is not.
- I trust my initial feeling when I deal with facts.
- My first impression is almost always right.
- I can usually sense when a claim is true or false, even if I can't always explain how I come to that conclusion.
- Evidence is more important than the question of whether something feels true.
- Assumptions need to be confirmed with data.
- I trust the facts, not my instincts, when it comes to deciding what is true.
- I need to be able to justify my beliefs with facts.
- Facts are determined by those who are in power.
- What counts as truth is defined by power.
- Scientific results are influenced by politics.
- "Facts" depend on their political context.

[1 do not agree at all – 4 completely agree]

#### **A.4 Participation in and understanding for protests**

Over the past two years, there have been numerous demonstrations in Germany, for example in favour of more climate protection, against corona measures or against the war in Ukraine.

Have you taken part in a demonstration in the last 2 years?

[yes/no]

If yes: Was this a demonstration...

- against Corona policies
- for climate protection (e.g. "Fridays for Future")
- against compulsory vaccination
- against the war in Ukraine
- other demonstration

[yes/no; tick all that apply]

For some time now, people in Germany have been demonstrating at so-called Corona demonstrations or *Querdenker* demonstrations against the policies and measures of the federal and state governments. Some are critical of these demonstrations, others find them justified.

Do you have understanding for these demonstrations?

[1 "No, no understanding" to 5 "Yes, full understanding"]

#### **A.5 Trust in government / science / media**

Here you can now see a number of public facilities and institutions.

How much trust do you generally place in them?

- The government
- Expert scientists
- Television
- Newspapers
- Social media

[7-point ordinal response scales from "no trust at all" to "a lot of trust"]

#### **A.6 Party preference**

Many people in Germany lean towards a particular political party, although they occasionally might vote for another party too. Do you lean towards a particular party?

- CDU/CSU
- SPD
- AfD
- FDP
- Bündnis 90 – Die Grünen
- Die Linke
- No party
- No response
- Other, please specify: \_\_\_\_\_

## B) Full Regression Tables

**Table B.1**

	<b>Main Effects (Fig 2)</b>	<b>by pre-existing opinion (Fig 3)</b>		
		main	middle	denier
<b>Topic</b> (ref. risk)				
vax	-1.30***	-1.35***	-1.22***	-1.23***
	[0.11]	[0.13]	[0.23]	[0.27]
mask	-0.51***	-0.76***	-0.33	-0.06
	[0.10]	[0.13]	[0.20]	[0.25]
<b>Author sex</b>				
female	-0.02	-0.11	0.32	0.01
	[0.10]	[0.11]	[0.18]	[0.23]
<b>Data Source</b> (ref. none)				
study	-0.05	0.02	-0.1	0.13
	[0.12]	[0.14]	[0.23]	[0.28]
study with numbers	-0.03	0.09	-0.07	-0.14
	[0.12]	[0.14]	[0.22]	[0.27]
<b>Affiliation</b> (ref. blog author)				
journalist	0.06	-0.08	0.18	0.49
	[0.13]	[0.14]	[0.22]	[0.29]
scientist	0.12	0.11	-0.07	0.56*
	[0.12]	[0.14]	[0.22]	[0.26]
<b>Vignette Ideology</b> (ref. mainstream)				
middle	0.04	-0.68***	0.81***	1.57***
	[0.12]	[0.13]	[0.22]	[0.30]
denier	-2.24***	-4.55***	-0.78***	3.45***
	[0.15]	[0.15]	[0.23]	[0.30]
<b>Constant</b>	7.02***	8.36***	5.95***	3.50***
	[0.17]	[0.18]	[0.27]	[0.39]
R <sup>2</sup>	0.14	0.4	0.1	0.23
N (vignettes)	3526	2142	706	671
N (respondents)	1178			

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Linear regression coefficients with robust standard errors in parentheses

**Table B.2**

	<b>mainstream respondents: data quality (Fig 4)</b>					
	no source	study	numbers	blogger	journalist	scientist
<b>Topic</b> (ref. risk)						
vax	-1.49***	-1.31***	-1.24***	-1.04***	-1.48***	-1.50***
	[0.20]	[0.20]	[0.19]	[0.20]	[0.20]	[0.20]
mask	-0.59**	-0.71***	-0.59**	-0.34	-0.93***	-0.59**
	[0.20]	[0.20]	[0.20]	[0.19]	[0.19]	[0.19]
<b>Author sex</b> female	0.19	-0.12	-0.40*	-0.01	-0.3	-0.07
	[0.17]	[0.17]	[0.16]	[0.17]	[0.17]	[0.15]
	-0.27	-0.31	0.02	-0.03	-0.05	-0.46*
<b>Vignette Ideology</b> (ref. main)						
middle	[0.20]	[0.20]	[0.19]	[0.21]	[0.18]	[0.19]
	-3.31***	-3.47***	-3.12***	-3.12***	-3.15***	-3.61***
denier	[0.23]	[0.22]	[0.21]	[0.23]	[0.22]	[0.21]
	7.52***	7.81***	7.67***	7.33***	7.73***	7.94***
<b>Constant</b>	[0.22]	[0.20]	[0.20]	[0.21]	[0.21]	[0.19]
R <sup>2</sup>	0.27	0.29	0.27	0.24	0.27	0.31
N (vignettes)	957	984	1003	983	981	980
N (respondents)	723	725	696	709	680	705

	<b>protest movement: data quality (Fig 5)</b>					
	no source	study	numbers	blogger	journalist	scientist
<b>Topic</b> (ref. risk)						
vax	-0.65	-1.32*	-1.21*	-1.20*	-1.39*	-0.59
	[0.55]	[0.57]	[0.50]	[0.58]	[0.55]	[0.58]
mask	-0.42	-0.59	-0.01	-0.55	-0.42	-0.01
	[0.59]	[0.58]	[0.56]	[0.57]	[0.61]	[0.53]
<b>Author sex</b> female	0.38	-0.11	0.39	0.22	0.61	-0.05
	[0.51]	[0.52]	[0.45]	[0.53]	[0.54]	[0.45]
	1.77*	0.96	1.20*	1.11	0.48	1.99***
<b>Vignette Ideology</b> (ref. main)						
middle	[0.71]	[0.60]	[0.59]	[0.66]	[0.64]	[0.55]
	2.87***	2.98***	2.98***	2.19***	2.49***	4.04***
denier	[0.64]	[0.62]	[0.60]	[0.65]	[0.64]	[0.55]
	3.97***	4.35***	3.79***	4.07***	4.64***	3.54***
<b>Constant</b>	[0.67]	[0.54]	[0.56]	[0.58]	[0.56]	[0.56]
R <sup>2</sup>	0.11	0.14	0.17	0.08	0.15	0.22
N (vignettes)	189	188	205	204	172	206
N (respondents)	183	138	141	149	126	144

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Linear regression coefficients with robust standard errors in parentheses

**Table B.3**

	baseline-adjusted speed (Fig 6)		
	20 <sup>th</sup> percentile	50 <sup>th</sup> percentile	80 <sup>th</sup> percentile
<b>cognitive dissonance</b> (ref: vignette = opinion)			
mainstream vignette for denier	-0.05*	-0.04	-0.08**
	[0.02]	[0.03]	[0.03]
middle vignette for denier	0.05	0.07**	0.10*
	[0.03]	[0.03]	[0.04]
mainstream vignette for middle position	-0.05**	0.02	0.05
	[0.02]	[0.03]	[0.04]
middle vignette for mainstreamer	0.05***	0.06***	0.02
	[0.01]	[0.01]	[0.02]
denier vignette for middle position	0.00	0.07*	0.05
	[0.03]	[0.03]	[0.04]
denier vignette for mainstreamer	0.00	0.06***	0.02
	[0.02]	[0.02]	[0.02]
<b>Constant</b>	0.25***	0.38***	0.60***
	[0.01]	[0.02]	[0.03]
R <sup>2</sup>	0.01	0.01	0.01
N (vignettes)	3527	3527	3527
N (respondents)	1178	1178	1178

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

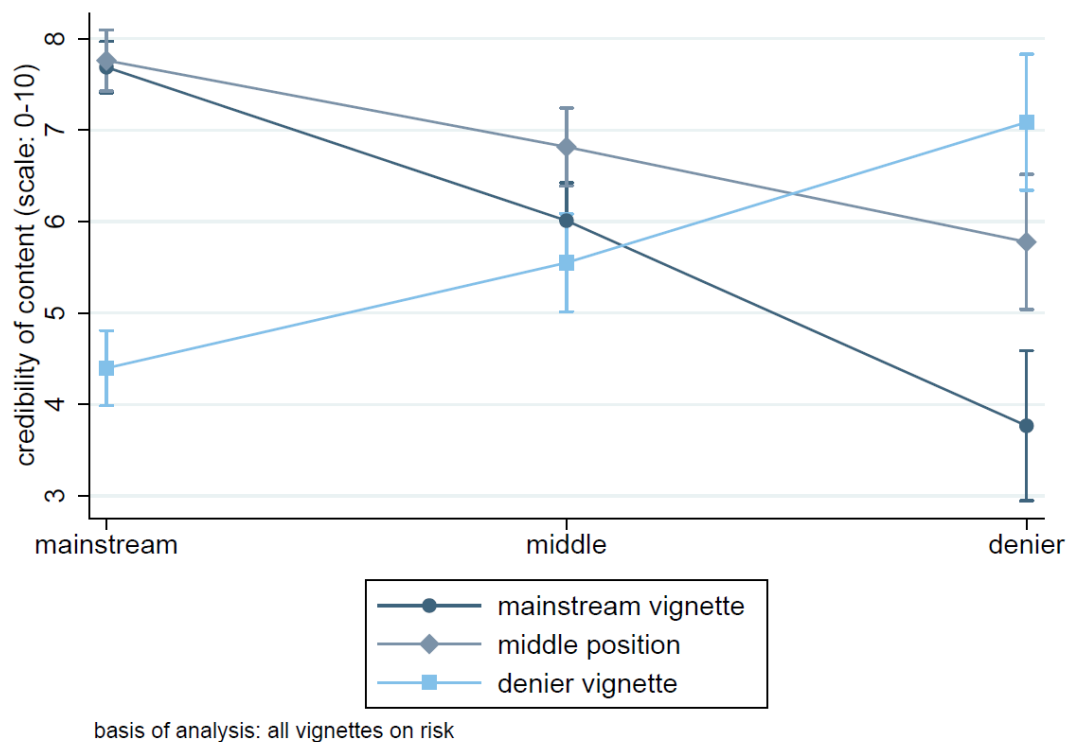
Quantile Regression coefficients with robust standard errors in parentheses.

Vignette dimensions not displayed for better readability.

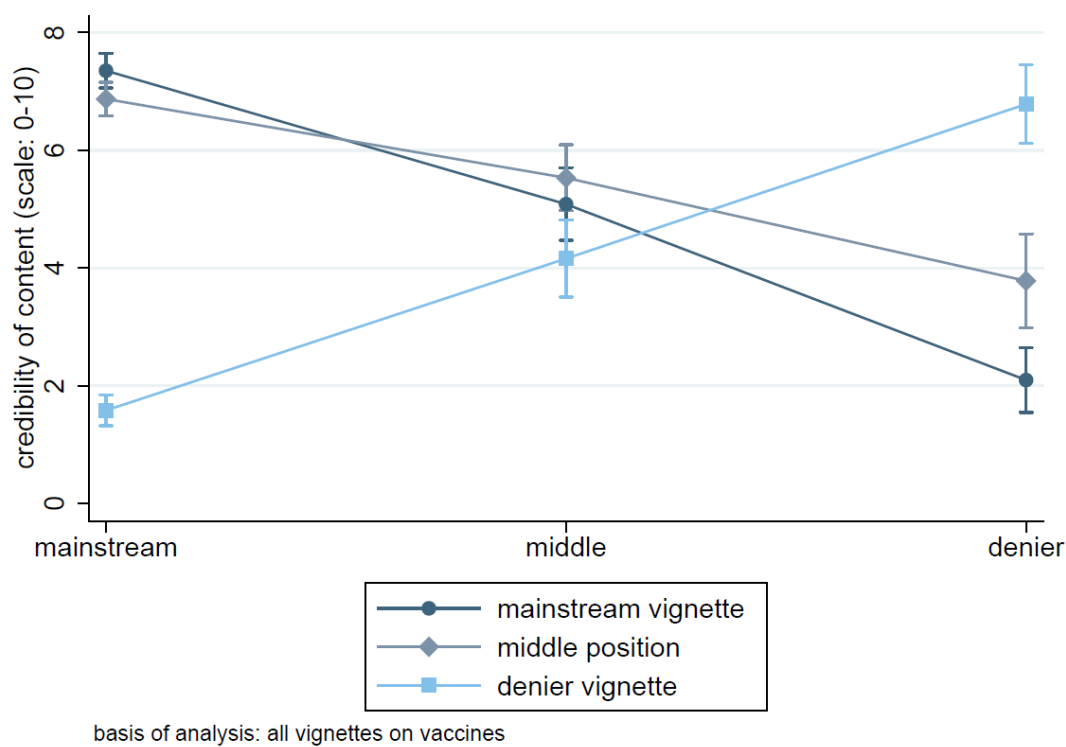


### C) Confirmation Bias (Figure 3) by Vignette Topic

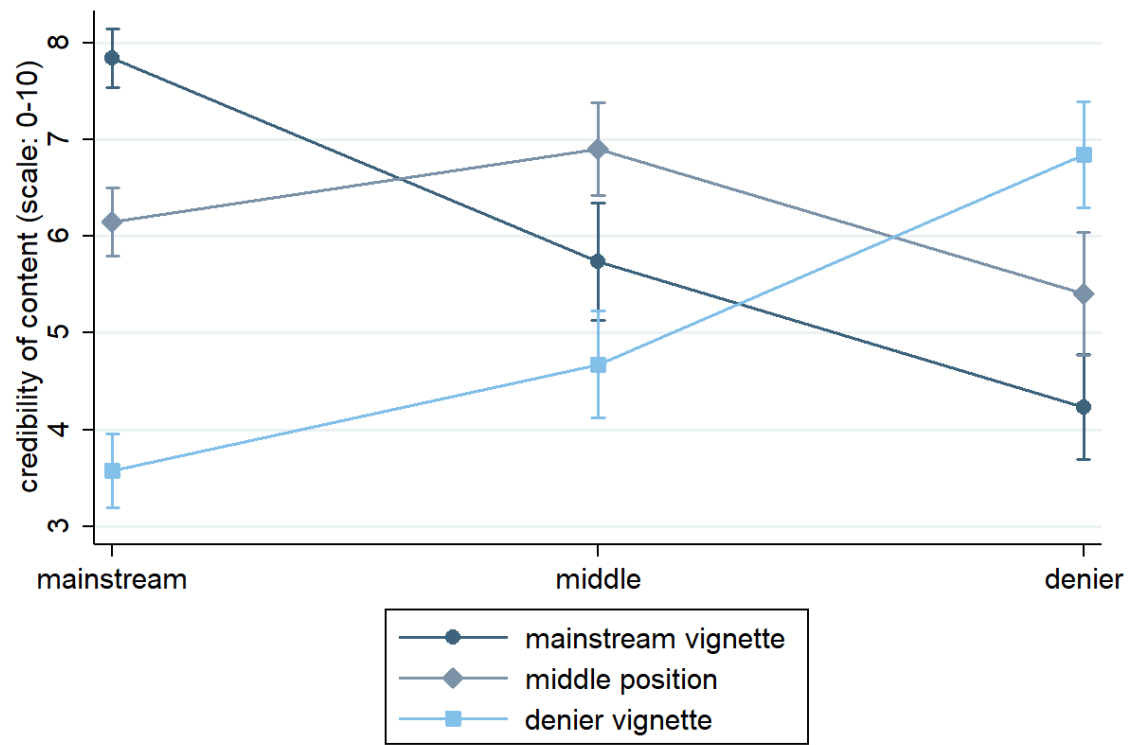
Graph C.1



Graph C.2



**Graph C.3**



basis of analysis: all vignettes on masks