

## Overview of preregistered hypotheses and where they are tested

### Experiment 1

Preregistered hypothesis		Tested hypotheses			
No.	Hypothesis		Location	No.	Comment
1a	We expect participants high in numeric ability to be more correct and <i>more certain overall across the four scenarios</i> .	→	"More correct" → Main manuscript "More certain" → Supplemental material 1	H1 & 1a	
1b	Based on findings from our pilot studies, we do not expect that people high and low in RWA will show ideological biases in their initial conclusions about the relation between policies on Muslim prayer rooms and support for Islamic extremism. That is, we will not replicate previous findings of an ideological bias in the initial conclusions, such that participants' conclusions will be more correct if the conclusion aligns with their ideology (e.g., participants high in RWA more correct if data suggest an increase than a decrease in extremism following generous prayer room policies, and vice versa for those low in RWA).	→	Main manuscript	H2-3	Reversed hypothesis before data analysis.
1c	We expect a similar result, that is no systematic ideologically based biases on the initial conclusions for people who do, or who do not see Islam as compatible with the British way of life.	→	Supplemental material 1 (Figure S1 & Table S1)	1c	Reversed hypothesis before data analysis.
1d	However, we predict that participants who draw conclusions in line with their ideology/beliefs	→	Supplemental material 1 (Figures S2-3 & Tables S2-3)	1d	

	(RWA, Islam/democracy compatibility), whether correct or erroneous, will be more certain of their conclusion than those who draw correct or erroneous conclusions counter to their ideology/beliefs.				
1 e	We do not expect any effect of ideology/beliefs (RWA, Islam/democracy compatibility) on conclusions or certainty for the neutral scenarios.	→	RWA-accuracy → main manuscript RWA-certainty → Supplemental material 2 (S Confidence Figure 1 & S Confidence Table 1) Islam/democracy-accuracy → Supplemental material 1 (Figure S1 and Table S1) Islam/democracy-certainty → Supplemental material 1 (Figure S3 and Table S3)	H2-3, H4, 1e, 1e	
2a	We hypothesize that participants, after given information about the correct conclusion, will be more willing to correct an incorrect conclusion, if the correct conclusions is consonant with their ideology/belief. Thus, people high in RWA will be more willing to correct an erroneous conclusion, and be more certain of their conclusion, if the correct conclusion is that generous rules for Muslim prayer rooms increase rather than decrease support for Islamic extremism. For participants low in RWA we expect the opposite pattern.	→	Supplemental material 1 (Figures S4-5 and Tables S4-5)	2a	
2 b	We also predict that participants who draw conclusions in line with their ideology/beliefs (RWA), whether correct or erroneous, will be more certain of their conclusion than those who draw correct or erroneous	→	See 1 d) above		

	conclusions counter to their ideology/beliefs.				
2 c	Participants who see Islam as incompatible with the British way of life will be more willing to correct an erroneous conclusion, and be more certain of their conclusion, if the correct conclusion is that generous rules for Muslim prayer rooms increase rather than decrease support for Islamic extremism. For participants who see Islam as compatible with British life we expect the opposite pattern.	→	Supplemental material 1 (Figures S6-7 & Tables S6-7)		
2 d	We also predict that participants who draw conclusions in line with their ideology/beliefs (compatibility Islam/ the British way of life), whether correct or erroneous, will be more certain of their conclusion than those who draw correct or erroneous conclusions counter to their ideology/beliefs.	→	See 2 c) above		
2 e	We predict that participants high in numeric ability will be better able to override ideological and belief biases than those low in numeric ability (see Lind et al., 2018). Hence, numeric ability is expected to interact with ideology/beliefs (RWA, Islam/democracy compatibility) in the prayer room scenario, such that the effect of beliefs on biased conclusions will only be evident among participants low in numeric ability.	→	Supplementary material 1 (Figure S8)	2e	

2 f	We predict no effects of RWA, nor of beliefs about Islam/British way of life on correct conclusions, certainty, or on changes of erroneous conclusions after feedback among participants presented with the rash and skin cream scenario.	→	See response to 1e		
3	In this final step, we further expect that participants who don't change an erroneous conclusion in line with their ideological beliefs will give a variety of arguments for not changing related to factors about low source credibility, poor study quality, and scientists' conspiracies.	→	Qualitative data for this hypothesis have not been coded or analysed yet.		

## Experiment 2

Preregistered hypothesis			Tested hypotheses		
No.	Hypothesis		Location	No.	Comment
1a	We expect to replicate a three-way interaction (problem scenario*scenario outcome*ideological view) indicating that people high and low in RWA will show ideological biases in their initial conclusions about the relation between policies on Muslim prayer rooms and support for Islamic extremism. That is, we will again find participants' conclusions to be more correct if the correct results align with their ideology (e.g., participants high in RWA	→	Main manuscript	H1	

	more correct if data suggest an increase than a decrease in extremism following generous prayer room policies, and vice versa for those low in RWA).				
1b	We hypothesize that participants, when given information about the exact percentages of instances in each of the scenario conditions, regardless of scenario will increase the accuracy of their conclusions. With this clear presentation of the target problems, we predict that a significant part of participants who based their first conclusion on ideological biases will now correct these. Thus, the interaction between problem scenario (skin rash/ extremism), ideological view (high/low in RWA), and scenario outcome (increase or decrease) will decrease significantly from the first to the second conclusion.	→	Main manuscript	H2-3	
1c	We expect to replicate the main effect of problem scenario in participants' conclusions, such that they will show an overall lower accuracy in the polarized vs. the neutral problem. We predict that this effect of scenario will decrease significantly when participants have been presented with the exact percentages.	→	See 1b		
1d	We also expect to replicate the lower certainty overall in the polarized, vs the neutral problem. As with accuracy, we predict that this effect of scenario will decrease when participants	→	Supplemental material 2 (S Confidence Figure 2 and S Confidence Table 2)	H4	

	have been presented with the exact percentages.				
1 e	We hypothesize that participants' certainty will predict their accuracy, such that they will be more certain when their responses are correct rather than incorrect. However, based on our previous results, we predict that this effect will be conditioned on ideological biases. Thus, we expect that in the polarized scenarios, participants who are more certain in their response will show a higher probability of being correct when the findings are in line with their ideology, and lower probability of being correct when the findings contradicted their ideology. Thus, for people scoring high in RWA we expect increased certainty in the response to predict greater accuracy in the prayer room scenario when the findings indicate an increase in extremism, but poorer accuracy in the decrease scenario, and vice versa for people scoring low in RWA.	→	Supplemental material 1 (Figure S8 & Table S8)		
2a	We expect participants high in cognitive/numeric ability to be more correct and more certain overall across the four scenarios. However, in line with our previous findings, we expect the effect of numeracy to be lower in the polarized vs. neutral problem.	→	Accuracy → Main manuscript (Table 3) + Supplemental material 1 (Figure S9) Certainty → Supplemental material 1 (Figure S10 & Table S9)	H1, 2a	
2 b	We also predict that participants high vs. low in numeric ability will be better able to correct their	→	Supplemental material 1 (Figure S11-12 & Tables S10-11)	H1,	

	conclusions, and show increased certainty the second time irrespective of scenario version.				
3	In this final step, we further expect that participants who don't change an erroneous conclusion in line with their ideological beliefs will give a variety of arguments for not changing related to factors about low source credibility, poor study quality, and scientists' conspiracies.	→	Qualitative data for this hypothesis have not been coded or analysed yet.		