Supplementary Material 1: Individual Level Analyses

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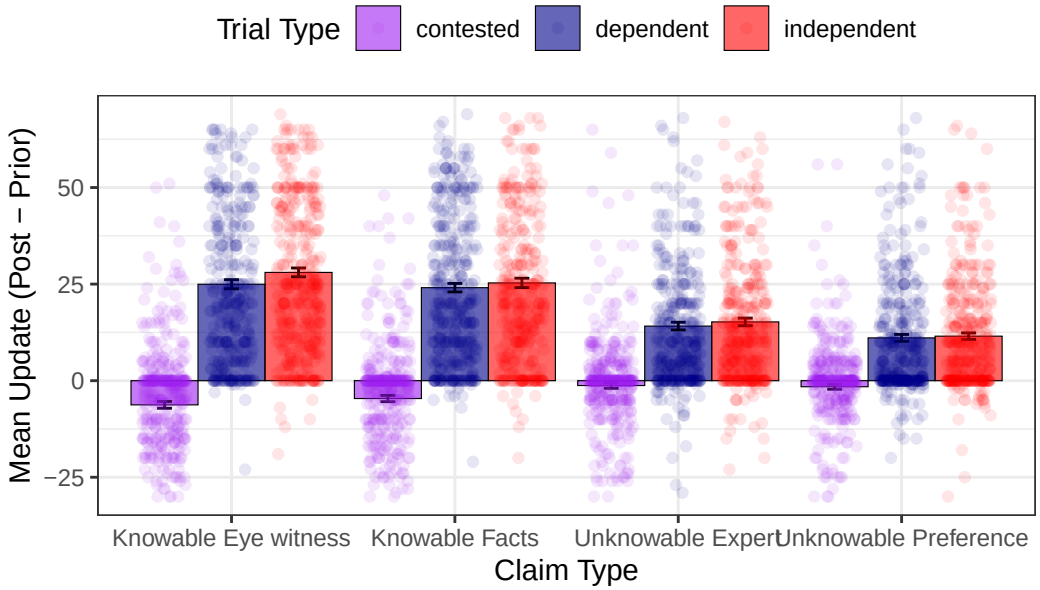
1 Priors

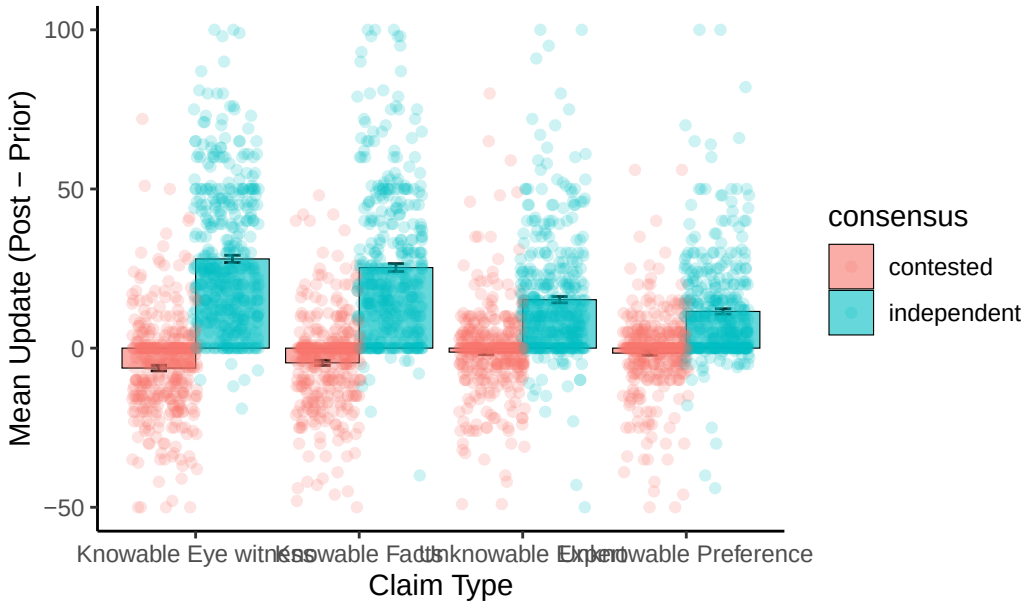
The priors plot is too large to show here, but it is in 07_Plots/priors.png (and on the OSF).

2 What were the average belief updates for each claim type?

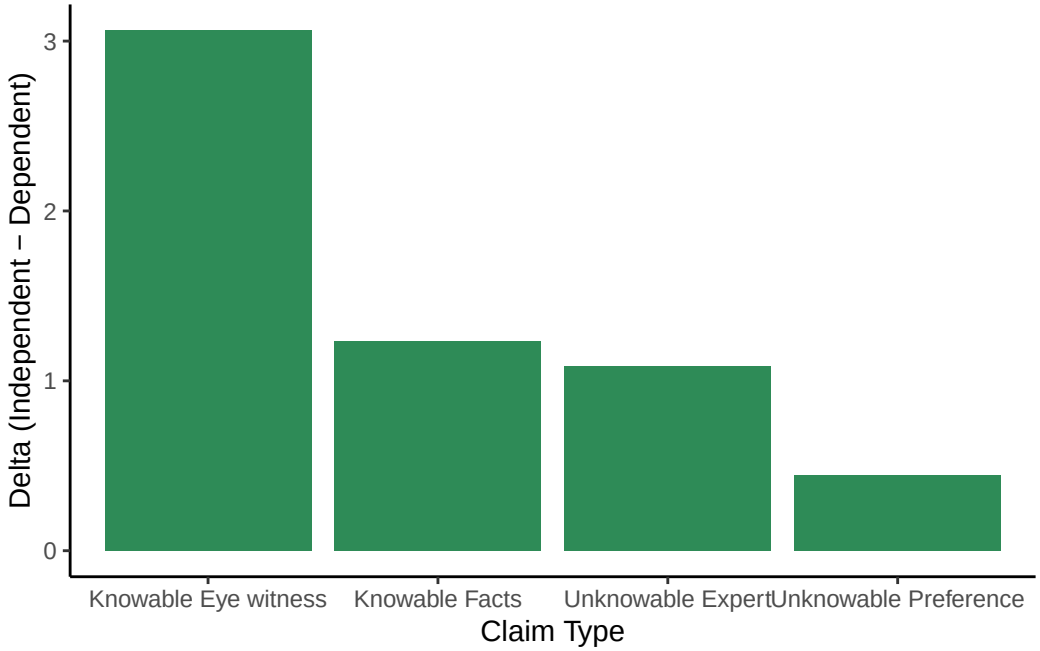
2.0.1 Independent v Dependent consensus



2.0.2 Contested v Independent Consensus



3 What were the average independence deltas (independent - dependent) for each claim type?



4 Modelling

4.1 Model Comparison

4.1.1 Excluding contested condition (independent v dependent)

	model	excluded_condition	all_looic	all_se	model_rank
1	group-prior	contested	26952	103	4
2	group-prior-consensus	contested	26946	103	3
3	group-prior-consensus-claim	contested	26493	111	1
4	group-prior-consensusXclaim	contested	26496	111	2

4.1.2 Excluding dependent condition (independent v contested)

	model	excluded_condition	all_looic	all_se	model_rank
1	group-prior	dependent	27693	100	4
2	group-prior-consensus	dependent	26633	116	3
3	group-prior-consensus-claim	dependent	26565	117	2

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4 group-prior-consensusXclaim          dependent     26335    121          1
```

4.2 Estimates

4.2.1 Excluding contested condition (independent v dependent)

```
                                Estimate   Lower   Upper
b_Intercept                       42.896  40.789  44.977
b_pre_adjusted                     0.666   0.648   0.684
b_consensusindependent             1.678   0.725   2.620
b_claim_typeKnowableFacts         -2.706  -4.055  -1.329
b_claim_typeUnknowableExpert     -12.420 -13.816 -11.054
b_claim_typeUnknowablePreference -15.898 -17.271 -14.512
```

```
 contrast                                       estimate lower.HPD upper.HPD
 Knowable Eye witness - Knowable Facts              2.71      1.33      4.03
 Knowable Eye witness - Unknowable Expert          12.42     11.02     13.77
 Knowable Eye witness - Unknowable Preference      15.90     14.47     17.21
 Knowable Facts - Unknowable Expert                 9.71      8.29     11.06
 Knowable Facts - Unknowable Preference            13.19     11.80     14.48
 Unknowable Expert - Unknowable Preference          3.48      2.12      4.85

Results are averaged over the levels of: consensus
Point estimate displayed: mean
HPD interval probability: 0.89
```

4.3 Exploritory analysis: Looking at prior *certainty*

It is possible that our claim type results could be driven by the fact that people's prior beliefs weren't as strong for certain kinds of claims, which therefore made them more likely to change their beliefs. For example, people are likely to have stronger prior beliefs about things that are about facts, which they could have heard before, or personal preferences compared to things like eyewitness claims that they have never seen themselves. To test this, we ran another model that, in addition to all of the other predictors, looked at people's prior *certainty.* We quantified certainty as the absolute value of participants' prior belief minus the scale midpoint (50), such that a belief was less certain if it was closer to the mid point. This analysis was **not** pre-registered.

4.3.1 Excluding contested condition (independent v dependent)

	model	all_looic	all_se	model_rank
1	group-prior	26952	103	5
2	group-prior-consensus	26946	103	4
3	group-prior-consensus-claim	26493	111	2
4	group-prior-consensusXclaim	26496	111	3
5	group-prior-consensusXclaim-certainty	26460	114	1

The model performs better according to LOOIC when we consider prior certainty in addition to the other factors. However, to what extent does this reduce the credibility of the other main effects that were 89% credible in the next best performing model?

	Estimate	Lower	Upper
b_Intercept	44.861	42.383	47.289
b_pre_adjusted	0.665	0.647	0.684
b_pre_certainty	-0.119	-0.153	-0.087
b_consensusindependent	1.726	-0.173	3.666
b_claim_typeKnowableFacts	-2.855	-4.739	-0.951
b_claim_typeUnknowableExpert	-11.937	-13.963	-9.939
b_claim_typeUnknowablePreference	-13.925	-15.874	-11.960
b_consensusindependent:claim_typeKnowableFacts	0.880	-1.784	3.552
b_consensusindependent:claim_typeUnknowableExpert	0.960	-1.730	3.696
b_consensusindependent:claim_typeUnknowablePreference	-1.697	-4.423	1.017

Even though the model that includes certainty and an interaction does best, the main effects of claim type are still credible. However, it is worth noting that as prior certainty decreases, participants are more likely to be persuaded by the consensus. Controlling for certainty also did not make the claim type X consensus independence interaction more credible.

4.3.2 Excluding dependent condition (independent v contested)

	model	all_looic	all_se	model_rank
1	group-prior	27693	100	5
2	group-prior-consensus	26633	116	4
3	group-prior-consensus-claim	26565	117	3
4	group-prior-consensusXclaim	26335	121	1
5	group-prior-consensusXclaim-certainty	26335	121	2

For the standard consensus comparison, a model that included certainty was equally as good (according to the balance of fit and parsimony defined by LOOIC) compared to the model that did not.

	Estimate	Lower	Upper
b_Intercept	9.850	8.054	11.671
b_pre_adjusted	0.718	0.700	0.735
b_pre_certainty	-0.026	-0.059	0.006
b_consensusindependent	32.868	31.051	34.741
b_claim_typeKnowableFacts	1.934	0.012	3.839
b_claim_typeUnknowableExpert	6.523	4.563	8.376
b_claim_typeUnknowablePreference	4.422	2.504	6.331
b_consensusindependent:claim_typeKnowableFacts	-4.562	-7.276	-1.944
b_consensusindependent:claim_typeUnknowableExpert	-18.685	-21.323	-16.039
b_consensusindependent:claim_typeUnknowablePreference	-21.402	-24.075	-18.769

All of the main effects and interactions that were credible in the best performing model that excluded certainty were still credible when we included certainty. Notably though, the 89% CI for certainty overlapped with zero and is quite small relative to the consensus independence comparison, suggesting that the consensus X claim type interaction cannot only be explained by people having weaker priors for certain claims.

5 Pre-registered follow up: broad claim types

The four claim types that we use in our main analyses are sub-types of two main claim types: knowable and unknowable. In our pre-registration, we said that if there was no claim type X independence interaction for the four main claim types, we would repeat the modelling on the two broader claim types.

5.1 Average belief updates

5.1.1 Independent vs. dependent