UNI FR
UNIVERSITÉ DE FRIBOURG
UNIVERSITÄT FREIBURG

An argumentative approach to deniability: theoretical and experimental considerations

Lou Odermatt

SWELL 2026

Neuchâtel

DARLING

Swiss National Science Foundation

Project DARLING

- 4-year SNSF-funded project on deniability
  - “Deniability in ARgumentation and LINGuistics”
  - University of Fribourg
  - Steve Oswald (PI), Bruna Paz-Schmidt (PhD Candidate), and Lou Odermatt (PhD Candidate)

- Two strands
  1. Corpus-based approach (BPS)
     - Find out how people use deniability in the political and legal context
  2. Experimental approach (LO)
     - Find out about the rhetorical features of denials (i.e., what makes them plausible)

UNI FR
UNIVERSITÉ DE FRIBOURG
UNIVERSITÄT FREIBURG

Introducing *Deniability*

Part 1

DARLING

Swiss National Science Foundation

1.1

What are (metalinguistic) denials?

DARLING

Swiss National Science Foundation

Definition

A metalinguistic conversational move by which a speaker provides an alternative interpretation of one of their previous utterances that is different from the one that their audience derived

Structure of denials

Full-fledged denial:

- Objection to meaning attribution (**OMA**)
- Alternative meaning (**AM**)

(Mazzarella, 2023, p. 222)

1.2

What is deniability?

Definition

The capacity of an utterance to be disavowed or canceled through a denial

Example (from Pinker (2007))

Bribe 1

A man gets pulled over for running a red light. To try to get out of this situation quickly, he decides to try to bribe the officer by telling him,

"So, maybe the best thing would be to take care of it here."

Bribe 2

A man gets pulled over for running a red light. To try to get out of this situation quickly, he decided to try to bribe the officer by telling him,

"If you let me go without a ticket, I'll pay you fifty dollars."

1.3

The problem of deniability

DARLING

Swiss National Science Foundation

Having deniability ≠ acceptance by the audience

- A wide range of utterances has deniability (Peet, 2015)
- Not all denials are accepted (Pinker, 2007, p. 453-457)
  - The driver could not be prosecuted in court (not guilty beyond a reasonable doubt)
  - However, the officer still might be convinced that the driver tried to bribe him

Solution: Plausibility

- Measures the acceptability by the audience
- Inherently pragmatic notion

UNI FR
UNIVERSITÉ DE FRIBOURG
UNIVERSITÄT FREIBURG

The linguistics of plausible deniability

Part 2

DARLING

Swiss National Science Foundation

2.1

What makes a denial plausible?

DARLING

Swiss National Science Foundation

1. The context

- Theoretically justified by Mazzarella (2023), Oswald (2022), and Camp (2018)
- Experimentally supported by Bonalumi et al. (2023)
- Importance of context = explained by pragmatic frameworks (e.g., Relevance Theory (Sperber & Wilson (1995))

Plausibility is influenced by the relevance of the denial…

…but by **what part** of the denial?

2.1

Commitment attribution in denials

DARLING

Swiss National Science Foundation

Commitment attribution (see Morency et al. (2008))

- Hearers attribute meaning to speakers regardless of the speaker's actual intent (Oswald, 2016)
- Central notion in deniability (see, for example, Bonalumi et al. (2023) or Boogaart et al. (2021)).

Attributed meaning = what is denied

Experimental findings

- Commitment to the attributed meaning decreases if a salient and likely alternative meaning is provided (Braun et al. (2024))

This suggests that

Plausibility of the provided AM influences the plausibility of the denial as a whole

- Theoretically justified by Mazzarella (2023)
- Experimentally supported by Antille (2024)

2.2

Experiment 1 – Plausibility of AM

DARLING

Swiss National Science Foundation

Goals

Provide evidence for the correlation between:

- The plausibility of the denial as a whole (OMA + AM)
- The way in which the AM is formulated
- The perceived image of the speaker

Participants

Analysis on 99 participants (see Table 1)

Table 1: Summary for participants for Experiment 1

Age mean	41.26(range: 19-71)
Sex	50 Female (50.5%) 49 Male (49.5%)
Primary language	96 English (95.7%), 1 English + Korean (1.01%), 2 English + Spanish (2.02%)
Country of residence	United States (100%)
Time taken mean	22.15 minutes
Monetary reward	£ 2.01 per person

2.2

Experiment 1 – Material

Items

- 16 dialogues
- Between two characters (X and Y)
- Topics were neutral
- Randomized

Conditions (pretested)

- Plausible alternative meaning (PAM)
- Implausible alternative meaning (IAM)

Attention check questions

- Three (Two had to be answered correctly)
- Same structure as items
- Randomized

2.2

Experiment 1 – Material

Figure 1: Example of plausible item for Experiment 1

X and Y are siblings. They are discussing the distribution of weekly chores, and Y comes up with an already-made distribution of tasks for both X and Y. The dialogue proceeds as follows:

X_1: "You are always the one deciding who does what chore."

Y_1: "Are you implying that I don't divide chores equally?"

X_2: "I didn't mean that!" **OMA**

Y_2: "How so?"

X_3: "I meant that I'd also like to decide which chores I do sometimes." **AM (here PAM)**

2.2

Experiment 1 – Material

Figure 2: Example of implausible item for Experiment 1

X and Y are siblings. They are discussing the distribution of weekly chores, and Y comes up with an already-made distribution of tasks for both X and Y. The dialogue proceeds as follows:

X_1: “You are always the one deciding who does what chore.”

Y_1: “Are you implying that I don’t divide chores equally?”

X_2: “I didn’t mean that!" **OMA**

Y_2: "How so?"

X_3: "I meant that it must be a burden for you to make those decisions every week.” **AM (here IAM)**

2.2

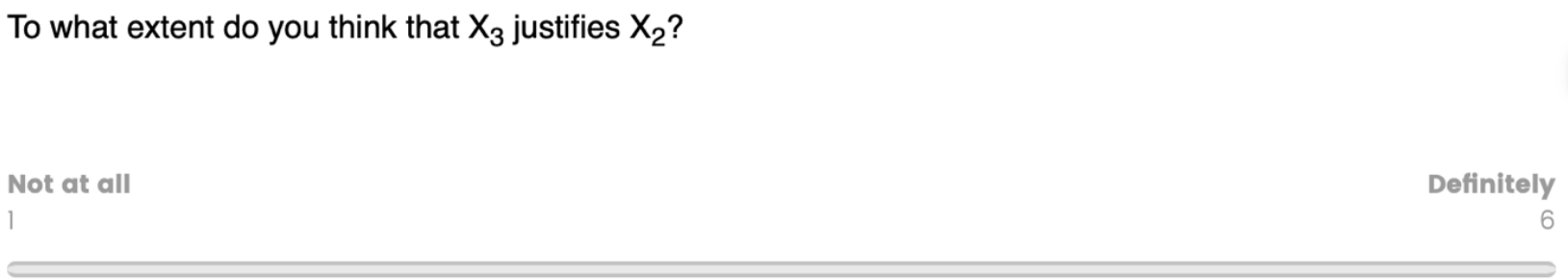
Experiment 1 – Material

Measures

- Q1: To what extent do you think X_3 (the AM) justifies X_2 (the OMA)?
- Q2: To what extent do you think X (the denying speaker) is, overall, speaking in good faith?
- Q3: Based on the whole dialogue, to what extent do you think X_2 (the OMA) is plausible?

Participants were asked to evaluate these questions on a slider from 1 (Not at all) to 6 (Definitely).

Figure 3: Example of measure for Experiment 1



2.3

Experiment 1 – Hypotheses & Design

Hypotheses

- Higher scores for all three measures for the plausible condition
- Significant correlation between all three measures

These hypotheses have been preregistered on the OSF website

Design

Counterbalanced within-subject design (using a latin-square):

- Participants were randomly assigned to one of two lists (List 1 and List 2)
- All items were displayed to all participants
- The condition under which the items appeared varied

2.3

Experiment 1 – Procedure

DARLING

Swiss National Science Foundation

Standard procedure

1. Recruitment via Prolific
2. Display of welcome message and consent form
3. Display of sample Item
4. Display of items and ACQs

2.4

Experiment 1 – Results

- Significantly higher mean score for PAM than IAM
- Strong internal coherence across items (α = .858, .859, and .865)
- Small effect sizes (η^2 = .217, .161, and .149)

Q1

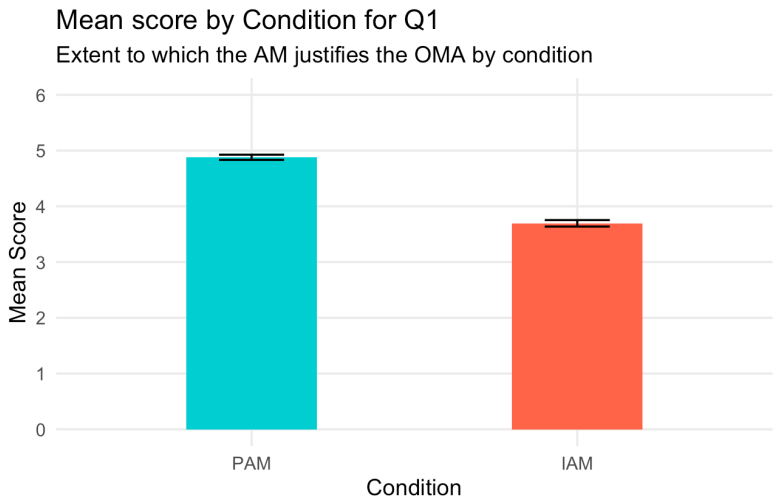


Figure 4: Difference in mean between conditions for Q1 in Experiment 1

Q2

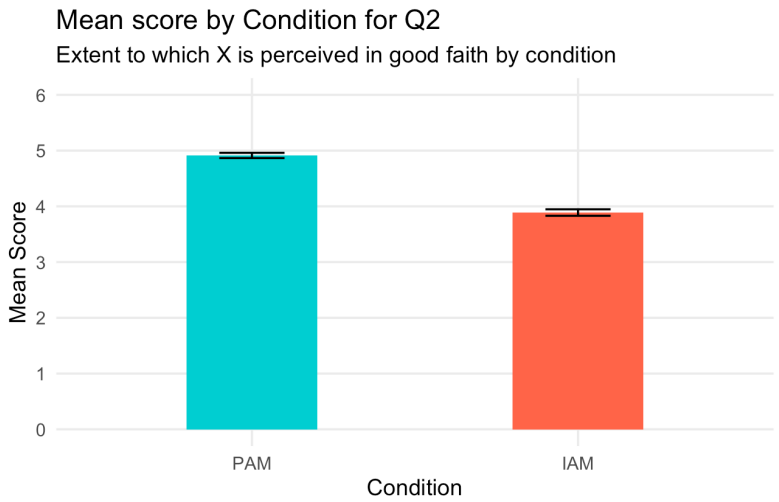


Figure 5: Difference in mean between conditions for Q2 in Experiment 1

Q3

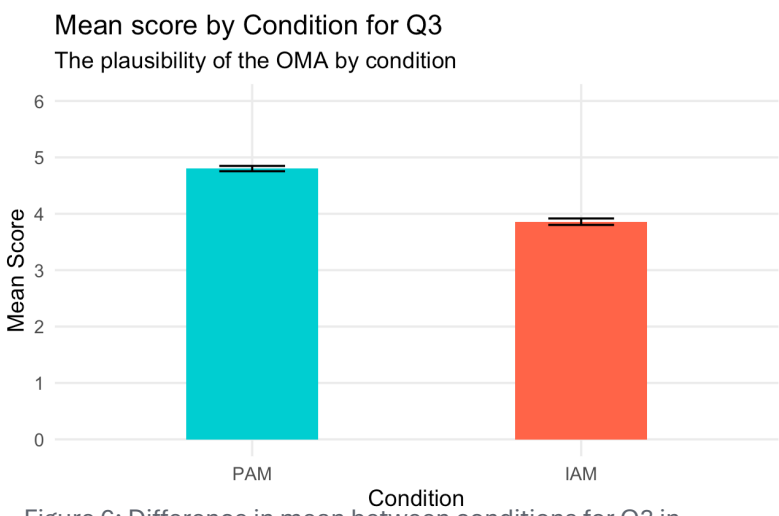


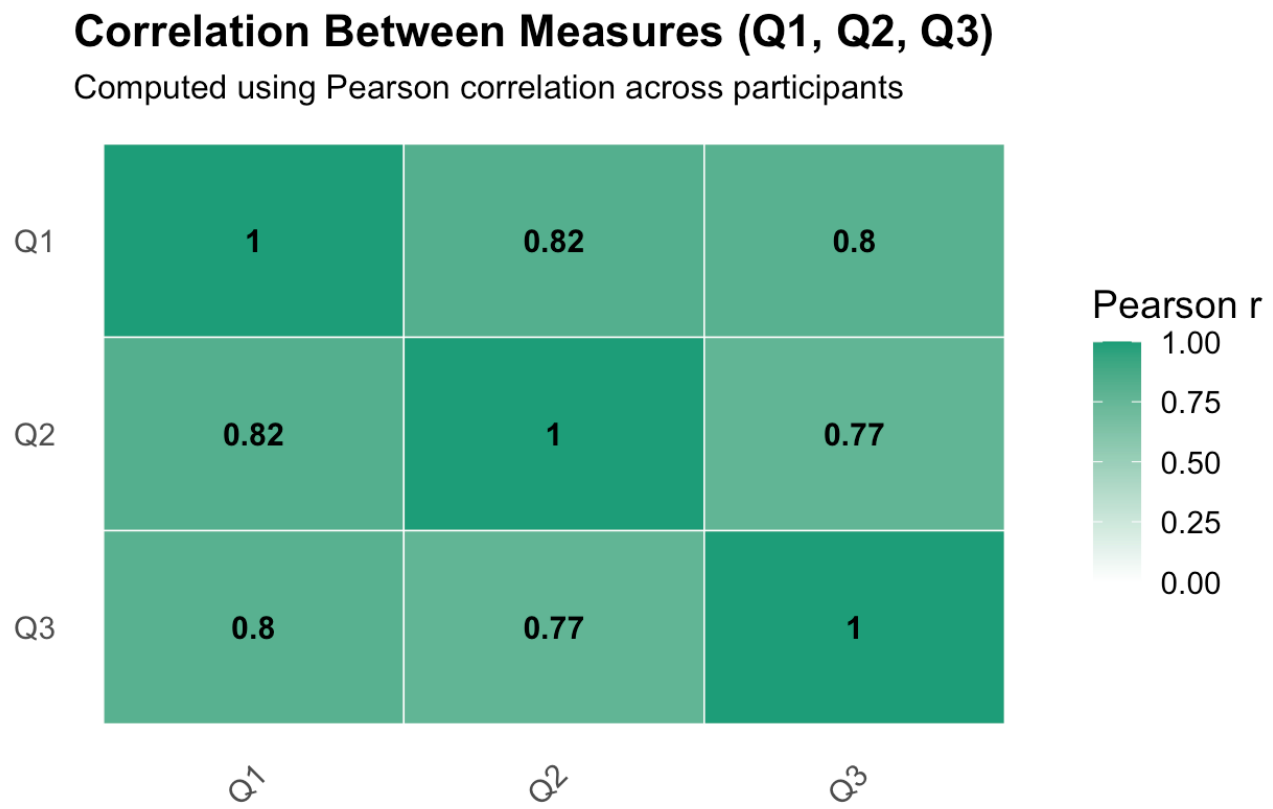
Figure 6: Difference in mean between conditions for Q3 in Experiment 1

2.4

Experiment 1 – Results

- High correlation between measures

Figure 7: Correlation between results for measures in Experiment 1



2.5

Experiment 1 – Discussion

DARLING

Swiss National Science Foundation

The plausibility of the AM influences:

- The perception of justification between the AM and the OMA
- The image of the speaker
- The plausibility of full-fledged denial (OMA+AM)

This suggests that:

- The plausibility of a denial does not only depend on *what* is denied, but also on ***how*** it is denied
- The AM of a denial has an important influence on the denial as a whole

Similar to arguments

UNI FR
UNIVERSITÉ DE FRIBOURG
UNIVERSITÄT FREIBURG

The argumentative function of denials

Part 3

DARLING

Swiss National Science Foundation

3.2

Arguments and denials – similarities

DARLING

Swiss National Science Foundation

Internal structure

Arguments

- Articulate *premises* with *conclusions* (Wohlrapp, 2026, p. 16)
  - Conclusions
  - Premises

- Argumentative indicators (see van Eemeren et al. (2007))
  - because

Denials

- Two parts (see slide 4)
  - OMA
  - AM

- Two parts can be linked through an argumentative indicator
  - “I didn’t mean X because I meant Y.”

3.2

Arguments and denials – similarities

DARLING

Swiss National Science Foundation

Importance of context

Arguments

- Argumentative context (see Van Eemeren & Grootendorst (2004)):
  - Disagreement
  - Participants do not align on the issue
- Context influences the acceptability of arguments (see Oswald (2023))

Denials

- Argumentative context
  - Inherently managing disagreement
  - Meant to realign participants on what was said
- Context influences the plausibility of denials (see results Experiment 1)

3.3

Experiment 2 – Argumentative denials

DARLING

Swiss National Science Foundation

Goals

Provide evidence for:

- The hypothesis that people treat denials and arguments similarly
- The inherent argumentative function of denials

This is only an **exploratory experiment**

Measures

- Q1: To what extent do you think that X wants to convince Y in X_2 (the full-fledged denial)?
- Q2: To what extent do you think X is giving Y a reason in X_2 (the full-fledged denial)?

3.4

Experiment 2 – Results

- Significantly higher mean score for items with AM (*Arg*) than with no AM (*NoArg*)
- Strong internal coherence across items (α = .774 and .752)
- Medium effect size (η^2 = .396 and .449)
- High correlation between both measures (*r* = .654)

Q1

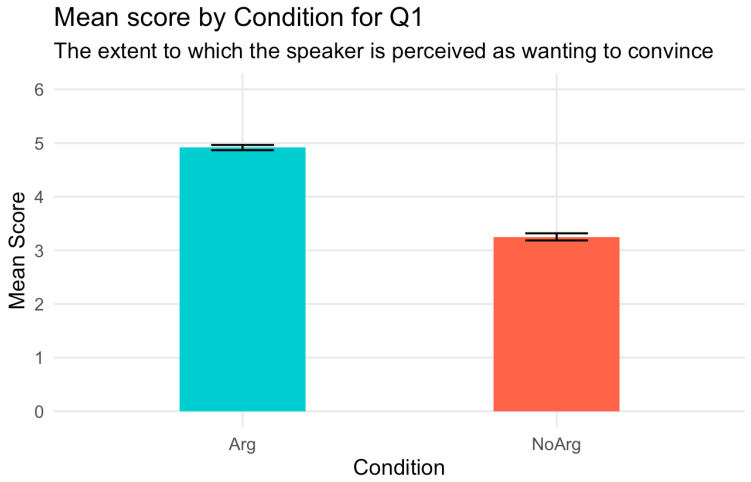


Figure 8: Difference in mean between conditions for Q1 in Experiment 2

Q2

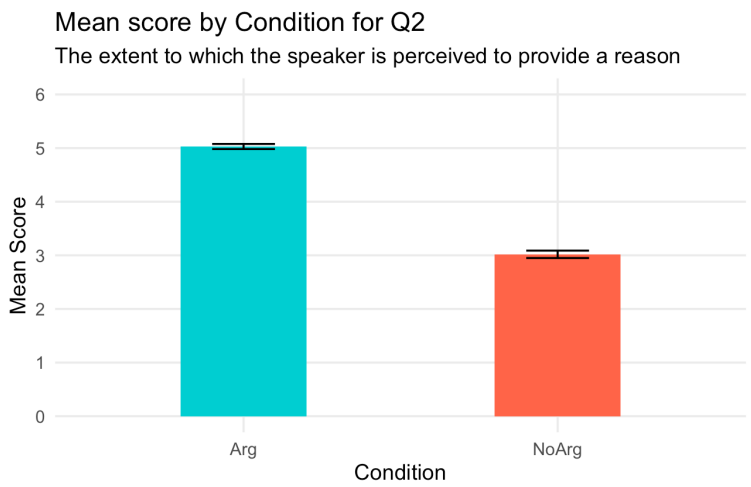


Figure 9: Difference in mean between conditions for Q2 in Experiment 2

3.5

Experiment 2 – Discussion

DARLING

Swiss National Science Foundation

The presence of an AM in a denial:

- Makes the speaker be perceived as wanting to convince more
- Makes the speaker be perceived as trying to provide more of a reason

This supports the hypothesis that denials are processed similarly than arguments

However

- This experiment only shows that there are similarities between denials and arguments
- More experiments would need to be conducted to precisely define the relationship between denials and arguments
- Given the results, further investigation of this question can be relevant

UNI
FR
UNIVERSITÉ DE FRIBOURG
UNIVERSITÄT FREIBURG

Thank you for your attention

DARLING

Swiss National
Science Foundation

Works cited list

Antille, M. S. (2024). *"That's merely circumstantial evidence..." The impact of prosody on the plausibility of the denial of insinuation* [Master Thesis]. University of Fribourg.

Aristotle. (2014). *Complete Works of Aristotle, Volume 1: The Revised Oxford Translation* (J. Barnes, Ed.). Princeton University Press. https://doi.org/10.1515/9781400835843

Bergqvist, H., & Grzech, K. (2023). The role of pragmatics in the definition of evidentiality. *STUF - Language Typology and Universals*, *76*(1), 1–30. https://doi.org/10.1515/stuf-2023-2004

Bonalumi, F., Bumin, F. B., Scott-Phillips, T., & Heintz, C. (2023). Communication and deniability: Moral and epistemic reactions to denials. *Frontiers in Psychology*, *13*, 1073213. https://doi.org/10.3389/fpsyg.2022.1073213

Boogaart, R., Jansen, H., & Van Leeuwen, M. (2021). "Those are Your Words, Not Mine!" Defence Strategies for Denying Speaker Commitment. *Argumentation*, *35*(2), 209–235. https://doi.org/10.1007/s10503-020-09521-3

Braun, G., Kuperwasser, I., & Shetreet, E. (2024). Alternative-based commitment: Commitment is modulated by the salience and likelihood of the alternative interpretation. *Journal of Pragmatics*, *228*, 31–44. https://doi.org/10.1016/j.pragma.2024.05.005

Camp, E. (2018). *Insinuation, Common Ground, and the Conversational Record* (Vol. 1). Oxford University Press. https://doi.org/10.1093/oso/9780198738831.003.0002

Fetzer, A., & Oishi, E. (2014). Evidentiality in discourse. *Intercultural Pragmatics*, *11*(3). https://doi.org/10.1515/ip-2014-0015

Mazzarella, D. (2023). "I didn't mean to suggest anything like that!": Deniability and context reconstruction. *Mind & Language*, *38*(1), 218–236. https://doi.org/10.1111/mila.12377

Works cited list

Morency, P., Oswald, S., & De Saussure, L. (2008). Explicitness, implicitness and commitment attribution: A cognitive pragmatic approach. *Belgian Journal of Linguistics*, *22*, 197–219. https://doi.org/10.1075/bjl.22.10mor

Oswald, S. (2016). Commitment attribution and the reconstruction of arguments. In F. Paglieri, S. Felletti, & L. Bonelli (Eds.), *The psychology of argument: Cognitive approaches to argumentation and persuasion* (pp. 17–32). College Publications.

Oswald, S. (2022). Insinuation is committing. *Journal of Pragmatics*, *198*, 158–170. https://doi.org/10.1016/j.pragma.2022.07.006

Oswald, S. (2023). Pragmatics for argumentation. *Journal of Pragmatics*, *203*, 144–156. https://doi.org/10.1016/j.pragma.2022.12.001

Peet, A. (2015). Testimony, Pragmatics, and Plausible Deniability. *Episteme*, *12*(1), 29–51. https://doi.org/10.1017/epi.2014.31

Pinker, S. (2007). The evolutionary social psychology of off-record indirect speech acts. *Intercultural Pragmatics*, *4*(4). https://doi.org/10.1515/IP.2007.023

Sperber, D., & Wilson, D. (1995). *Relevance: Communication and cognition* (2nd ed). Blackwell Publishers.

Van Eemeren, F. H., & Grootendorst, R. (2004). *A systematic theory of argumentation: The pragma-dialectical approach*. Cambridge University Press.

Van Eemeren, F. H., Houtlosser, P., & Snoeck Henkemans, A. F. (2007). *Argumentative indicators in discourse: A pragma-dialectical study*. Springer.

Wohlrapp, H. R. (2026). The Concept of Argumentation. In S. F. Aikin, J. Casey, & K. Stevens (Eds.), *Routledge handbook of argumentation theory* (1st ed.). Routledge.

Appendix – Results (tables)

Experiment 1

Q1

Experiment 1

Repeated-measures ANOVA results for Q1

Effect	df	df_error	F	p	η²
(Intercept)	1	98	2,518.820	< .001	0.935
Condition	1	98	62.093	< .001	0.217

Experiment 1

Descriptive statistics for Q1

Condition	N	Mean	SD	SE	95% CI Lower	95% CI Upper
PAM	99	4.880	0.968	0.097	4.687	5.073
IAM	99	3.696	1.275	0.128	3.441	3.950

Q2

Experiment 1

Repeated-measures ANOVA results for Q2

Effect	df	df_error	F	p	η²
(Intercept)	1	98	2,461.315	< .001	0.934
Condition	1	98	43.494	< .001	0.161

Experiment 1

Descriptive statistics for Q2

Condition	N	Mean	SD	SE	95% CI Lower	95% CI Upper
PAM	99	4.913	1.007	0.101	4.712	5.114
IAM	99	3.889	1.318	0.132	3.626	4.152

Q3

Experiment 1

Repeated-measures ANOVA results for Q3

Effect	df	df_error	F	p	η²
(Intercept)	1	98	2,486.017	< .001	0.937
Condition	1	98	41.140	< .001	0.149

Experiment 1

Descriptive statistics for Q3

Condition	N	Mean	SD	SE	95% CI Lower	95% CI Upper
PAM	99	4.802	0.993	0.100	4.604	5.00
IAM	99	3.860	1.255	0.126	3.609	4.11

Appendix – Results (tables)

Experiment 2

Q1

Experiment 2

Repeated-measures ANOVA results for Q1

Effect	df	df_error	F	p	η²
(Intercept)	1	96	2,830.857	< .001	0.940
Condition	1	96	135.011	< .001	0.396

Experiment 2

Descriptive statistics for Q1

Condition	N	Mean	SD	SE	95% CI Lower	95% CI Upper
Arg	97	4.916	0.847	0.086	4.745	5.086
NoArg	97	3.251	1.192	0.121	3.011	3.491

Q2

Experiment 2

Repeated-measures ANOVA results for Q2

Effect	df	df_error	F	p	η²
(Intercept)	1	96	2,806.864	< .001	0.929
Condition	1	96	141.306	< .001	0.449

Experiment 2

Descriptive statistics for Q2

Condition	N	Mean	SD	SE	95% CI Lower	95% CI Upper
Arg	97	5.029	0.910	0.092	4.846	5.213
NoArg	97	3.019	1.296	0.132	2.758	3.280