

HABILITATION THESIS REVIEWER'S REPORT

Masaryk University

Applicant

Mgr. Martin Lang, Ph.D.

Habilitation thesis

Why do religious people trust each other? A synthesis of experimental cross-cultural research on religious beliefs and behaviors

Reviewer

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It's a privilege and a pleasure to evaluate Dr Martin Lang's habilitation thesis. The thesis comprises a structured assembly of nine co-authored scholarly articles – four first-authored – published in international peer-reviewed journals (e.g., *Group Processes and Intergroup Relations* [IF=5.49], *Proceedings B* [IF=4.7]). Dr Lang collects these articles together into four thematic clusters encompassing different perspectives on the central research question of how and why religious people trust one another. These clusters, and their corresponding articles, are summarised and effectively contextualised in several introductory chapters.

I've been asked to comment on certain specific aspects of the thesis, so the rest of my report is headed accordingly.

Relevance of the Topic within the Academic Field: The thesis addresses a highly relevant topic in the field of the psychology and cognitive science of religion. Trust is fundamentally important for social and economic activity: it imbues and facilitates virtually all commercial transactions, underpins the performance of firms and other institutions, and predicts the rate of growth of GDP. Unfortunately, however, trust is fragile: difficult to establish, and easily eroded. Understanding the role that religious beliefs, behaviours and institutions play in facilitating interpersonal trust is thus a topic of vital social and scientific import. To give just one illustration of the relevance of this topic in the field, consider the highly charged events surrounding the publication of Whitehouse et al's (2019) *Nature* article "Complex societies precede moralizing gods throughout world history"¹. Whereas a prominent evolutionary position in the field holds that the cultural innovation of moralising gods facilitated the advent of complex, large-scale societies by enabling a hitherto unsustainable expansion of cooperation, Whitehouse et al. reported evidence that large societies actually pre-dated belief in such gods. The article attracted major public interest but ignited a firestorm of controversy within the field and was eventually retracted in the wake of criticisms of the authors' analytic choices.

¹ Whitehouse, H., François, P., Savage, P.E. *et al.* (2019). RETRACTED ARTICLE: Complex societies precede moralizing gods throughout world history. *Nature*, 568, 226–229. <https://doi.org/10.1038/s41586-019-1043-4>.

A final point here: though above I have addressed the relevance of Dr Lang's topic within the field of the psychology and cognitive science of religion, I should add that this topic's relevance is not confined to one specific field or discipline. Indeed, one of the great strengths of Dr Lang's approach is his "radical" interdisciplinarity. His convolute of studies utilises methods, theories and expertise from cognitive, evolutionary/historical and cross-cultural psychology, as well as anthropology, behavioural ecology, cultural evolution, economics, evolutionary biology, and religious studies. This commitment to interdisciplinarity is highly impressive and commendable.

Precision, Clarity and Understandability of the Topic Formulation: Dr Lang articulates the central question of the habilitation thesis—how and why religious people trust each other—with clarity, precision and purpose. His structured approach, dividing the investigation into four thematic clusters, enhances the comprehensibility of the research objectives and findings. This structured presentation aids in navigating the complex interplay between religious practices and trust.

Contributions to the Field and Comparison with Other Relevant Work: Dr Lang's thesis makes substantial contributions to our understanding of the mechanisms through which religion fosters trust. By integrating findings from nine studies, his work not only broadens the empirical base but also offers comparative insights across different cultural and religious contexts. Altogether, his thesis forms a comprehensive and rigorous investigation into the research topic, highlighting the role of religious rituals, moralizing gods, and cultural markers in trust formation, and offering new perspectives and methodologies for future research. As for comparison with other relevant work, suffice to say that in my judgement the body of work this thesis contains is world class.

Appropriateness and Relevance of the Methodological Approach: As befits his multidisciplinary orientation, Dr Lang's work incorporates a range of methodologies and techniques, including lab and field experiments (incorporating experimental economic games and technologies such as Sociometric Badges using accelerometers and Bluetooth), surveys, and analysis of pre-existing data sets. This combination of methods is impressive in itself, but I would draw particular attention to his commitment to open science (evidenced, in particular, by the registered report) and to collection of data from non-WEIRD populations (> 4,000 participants across 19 countries). These commitments ensure robust, replicable and generalisable findings.

Level of Analysis: The level of analysis is comprehensive and multi-layered, addressing both low-level behavioural mechanisms and higher-level cultural and cognitive processes. This depth of analysis allows for a nuanced understanding of the interplay between individual and collective religious practices and their impact on trust.

Formal Criteria (Language, Citations, etc.): The thesis meets high formal standards. Apart from being conceptually rich and empirically rigorous, the thesis is beautifully and eloquently written – a genuine pleasure to read. The scholarly yet accessible style facilitates understanding across disciplinary boundaries. Referencing is thorough and appropriate, reflecting Dr Lang's deep engagement with the relevant literature. As above, his documentation of methods and results adheres to the principles of open science, enhancing the transparency and reproducibility of the research. Papers are accompanied by rigorous and extensive supplementary materials.

Summary: Martin Lang's habilitation thesis is, in my view, an outstanding achievement. His work combines theoretical depth, uncommon methodological rigour, and practical relevance, making it a valuable resource for scholars and practitioners alike. I congratulate Martin on an

extremely accomplished body of work and will continue to follow his career with great interest.

Reviewer's questions for the habilitation thesis defence (number of questions up to the reviewer)

- p. 3: “it could be argued that humans have, on average, high dispositional trust”. How does the author reconcile this claim with the line of Hugo Mercier, and others, that humans are epistemically vigilant?
- p. 11: “being moral... can usually be equated with being trustworthy”. What are the limits to this equivalence? This seems a monistic claim about human morality (cf. pluralist conceptions like Moral Foundations Theory). How to reconcile this claim with other “foundations” from pluralist theories (e.g., what about moral behaviour based on the so-called “purity” foundation?) and with other monistic theories (e.g., Curry and colleagues² argue that cooperation is the essence of morality, while Gray and colleagues³ emphasise care about interpersonal harm etc.)?
- In Study 2 (Lang et al., 2017) and Study 8 (Shaver et al., 2018), the trust games employed were not real in the sense that there were not actually two players, hence participants were deceived that they were playing with another player (whose behaviour was in fact determined by an algorithm [as an aside, it’s unclear to me whether the DG in Study 6 was real or not, i.e., were DG transfers actually transferred to a recipient?]). Is this problematic? From an experimental economics perspective the transgression here is not so much ethical as scientific: deceiving participants in this way, and then reporting the deception in a published article, arguably has the potential to contaminate relevant subject pools. In making inferences from participant behaviour in economic studies, researchers rely on participants trusting that the economic incentives in a study are as they are stated to be. Some journals have explicit policies proscribing this sort of deception. It might be worth reflecting on this.
- A second point is that participants in the trust games were not (as I understand it) told that player 2 began with an initial endowment. For this reason, it is conceivable that allocations by focal participants (players 1) are indicative not of trust (or not *just* of trust) but of inequity aversion. Is that a problem for the inferences being made?
- Is the dot task in Study 5 a good measure of cheating? Erring on the side of right-side reporting seems the “rational” thing to do, much as a smoke detector biased towards false alarms is not “cheating.”
- In the discussion of costly signalling on p. 19, Dr Lang writes, “Person A would produce a signal that carries significant costs (e.g., walk on knees). Since individuals with low-quality traits cannot afford to produce the signal, paying the cost of the signal and later garnering the associated benefits of trustworthy exchange is profitable only for individuals with high-quality traits.” The contention here is that untrustworthy individuals (who are “low-quality” for the relevant trait) would be less able to afford to produce the signal (walk on their knees) than trustworthy individuals. But it’s not clear to me why that would be the case. It seems to me that there’s a disanalogy with classic cases of costly signalling such as the stotting behaviour of gazelles. In the case of stotting, fit gazelles signal to nearby predators that they are fit and healthy by leaping into the air (thus dissuading those predators from chasing them). In the stotting case it’s clear that unfit gazelles would not be able to “afford” the physiological cost of leaping into the air, i.e., there is a clear link between the signal

² Curry, O. S., Mullins, D. A., & Whitehouse, H. (2019). Is it good to cooperate? Testing the theory of morality-as-cooperation in 60 societies. *Current Anthropology*, 60(1), 47-69. <https://doi.org/10.1086/701478>

³ Gray, K., Young, L., & Waytz, A. (2012). Mind perception is the essence of morality. *Psychological Inquiry*, 23, 101–124. <http://dx.doi.org/10.1080/1047840X.2012.651387>

and the relevant quality. But in the trustworthiness-walking on knees case the link is not so clear. Why would an untrustworthy free rider be less able to walk on their knees?

- On p. 23 Dr Lang discusses CREDs and states that “such displays are costly.” But I think CREDs need not be costly. For example, imagine I pour you a drink and you hesitate to drink it for fear that I have poisoned it. If I then take a sip of the drink to convince you the drink is safe, this action is a CRED for my claim that the drink is not poisoned. But it’s only costly if the drink IS poisoned. Does Dr Lang agree? If so, what does he see as the relevant importance of CREDs and specifically *costly* displays?

Conclusion

The habilitation thesis entitled *Why do religious people trust each other? A synthesis of experimental cross-cultural research on religious beliefs and behaviors* by Mgr. Martin Lang, Ph.D., **fulfils** requirements expected of a habilitation thesis in the field of Psychology.

Date: 28/05/2023

Signature: