

Review of the PhD thesis titled:

**Facing Hypocrisy: Cognitive Dissonance and Strategies of its Reduction
Regarding Value Importance**

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The thesis focuses on the effect of experienced hypocrisy on the preference for pro-environmental reactions. The author explores various factors that lay at the roots of this relation. Specifically, she tested the role of the experienced dissonance understood as negatively valenced affect, as a mediator between hypocrisy and pro-environmental reactions. In a more explorative manner moderators such as importance of the value, need for closure, action orientation and self-esteem were tested.

In general, I must compliment the author for managing to explore compelling aspects in a well-explored line of research on dissonance and hypocrisy. Unundoubted strength of the thesis is that it addresses an important conceptual issue. At the same time the studies are embedded in an applied context of environment protection. Another asset is that the results come from three creative, empirical studies with various designs.

As every research project the proposed thesis is not free of limitations. The weakness lays in relying on opinions and preferences instead of behaviors measured in ecologically valid contexts. The literature review is of unequal quality, in my view. Some parts are well written and follow logically, others are somewhat more chaotic and less structured. Some moderators were introduced without extensive theoretical rationale and analyses seem overly exploratory. I have also doubts concerning the way the design of the studies and some results were reported.

Overall, however, the thesis is mature and my general impression is positive considering author's early stage of the career. I congratulate the author the courage in undertaking a topic that is challenging both at the theoretical and the methodological level. Flaws in presentation will likely fade away in the learning process. My more detailed comments follow below.

The literature review has, in general, a coherent structure and is competently presented. Nonetheless, this part of the thesis is of unequal quality. Some phenomena such as cognitive dissonance are thoroughly described. Other parts, however, could be elaborated in more details. For example, important constructs such as self-esteem or the need for cognitive closure could have been justified better and introduced in the literature review. Those variables are analyzed in an exploratory manner in all studies, treated as covariates. Nonetheless, rationale for using those variables seems necessary.

Relatively little attention has been paid to the literature regarding explored phenomena in the context of conservation and pro-environmental behaviors. For example, the attitude-behavior gap has been roughly mentioned through the reference to the outdated theory of reasoned action. Whereas, recent debates on the attitude-behavior gap (Kaiser et. al, 2010; Schultz, 2014) hypocrisy (Kaiser & Byrka, 2011) or trivialization and justification (Gifford, 2011), values (Steg et al., 20025) are present and vivid in environmental psychology. Even the theory of planned behavior has been explored in more modern contexts (see e.g., Bamberg, 2013).

Minor issue is that the literature review has some flaws when it comes to writing style. For example, the author uses casual language such as “putting it all together”. Also, imprecisions appear here and there in the text. For example, the author writes that the manipulations in the studies were kept similar. This is difficult to interpret from the methodological point of view.

Research goals competently guide the reader from one research question to the other. Nonetheless, some imprecisions are present here as well. For example, the author writes that she measured the effect of hypocrisy on behavior change, but in fact she measured preferences for different ways of coping with tension and negative affect (Study 1 and 2) or motivation and demotivation (Study 3).

The thesis would benefit from a clear definition of main constructs measured. For, example cognitive dissonance is a well-established and well explored phenomenon. Nonetheless, it has been approached in many ways in the literature and it would be helpful to know that the author operationalizes dissonance as negative valence (measures used capture less arousal or tension) early on.

Study 1 was a laboratory experiment, in which the author explored whether induced hypocrisy affected the preference for different pro-environmental reactions. The fact that the author conducted pilot studies is for sure a strength, but it would be useful to describe in the text body the main results of these pilot studies. Unfortunately, the Appendix (pp. 182-183) is not much more informative about the results of the pilots.

As mentioned before, I found it hard to see a clear rationale why the author introduced the need for closure and self-esteem as additional variables. It seems that the need for consistency could be equally interesting and worth exploring, but was not introduced in the thesis.

I have also some doubts about the validity of the procedure to induce hypocrisy. The necessary condition to induce hypocrisy would be for participants to experience discrepancy between information they wrote and their own behavior. This would require that information they wrote would be personal, internalized and related more or less to waste production. I wonder whether it was tested in any way, in the study. Probably, this is the question of the way the results were reported.

I found the dependent variable creative, but again I missed some rationale for choosing trivialization, justification and intention. The choice of reactions could be better argued. Otherwise, it seemed quite exploratory.

As for the data analysis, I was somewhat surprised that the author reported means and standard deviations for the evaluation of abstracts in the control and the experimental group (Table 1) and then used non-parametric tests to compare the groups. Some consistency in treating variables is necessary. Note as well, that with so many comparisons based on p-value inflate the chances of Type I error and correction for this error is necessary.

Please note that the formulation „Trait value slightly moderated the impact of hypocrisy on dissonance” (p. 56) is inappropriate when using conventional statistics based on p-value. Simply, the trait value was not a significant moderator. Note as well that insignificant results should not be highlighted in tables as it is misleading.

Finally, some conclusions in the summary have no support in the findings. The author wrote that “It seems that justification could be an alternative response to hypocrisy” basing this assumption on non-significant results on one of many comparisons for justification. This is rather not legitimate.

In sum, the author had a creative and valuable ideas for independent and dependent variables in Study 1. Unfortunately, some precision in describing and constructing these variables was lacking. Also, the way the analyses were reported was imperfect and some of them were very explorative without solid ground in the literature review.

Study 2 was a conceptual replication of Study 1 with an additional moderator, that is action-orientation. The author improved the induction of hypocrisy procedure by addressing weakness from Study 1. She also changed the measure of experienced emotions after the hypocrisy induction. An asset of Study 2 are new additional more ecologically valid dependent variables, that is engagement in helping environmental organizations and the willingness to sign up for the newsletter.

Study 2 still suffers from the same flaws in presenting results as Study 1, such as reporting means when using non-parametric tests or improper interpreting insignificant results. Additionally, the author reports moderated mediation models with included covariates (self-esteem, NFC). Whereas, it is customary to report the mediation or/and moderation models both with and without covariates.

Nonetheless, as a whole the methodology of Study 2 much improved compared to Study 1. I consequently compliment the author for inventive and creative dependent variables. The fact that the quality of the studies increases as the thesis progresses is of value.

Study 3 had the same design as Study 2 with exception, from what I understood, that an initial measure of mood was introduced. Multiple new variables were included as well. As the number of variables tested in Study 3 compared to Study 1 and Study 2 increased, unfortunately a number of minor methodological flaws increased as well. I will give a few examples for illustrative purposes. For example, the author excluded participants that were affected by the COVID-19 pandemic and abortion law protests, but the reader does not learn on what ground these exclusions were made or what the cutoff point was.

Variables such as environmental demotivation were introduced without clear reasoning or extensive reference to the literature. At the later stages of the project more confirmatory or grounded in the literature analyses are expected. I had an impression that some variables and scales were introduced by chance. I had problems with understanding the willingness to change behavior variable described on page 103. I am not convinced that the described measure captured the willingness to change. It is also not clear to me which measures and why were discarded. I must admit I had hard time understanding what the author meant by saying: "Only later did we realize the tautology of that reasoning (i.e., people who are willing to do something for the environment will express greater motivation), and so we decided to discard it."

As for the environmental motivation measure it is not sure for me why the author did not use established scales. Instead, she decided to create her own non-validated measures. Noteworthy, Cronbach's alpha is not an indicator of the validity of the measure or of the unidimensional structure of the subscale.

As far as general discussion is concerned, I appreciate that the author synthesized competently multiple threads of research addressed in the thesis (especially exploratory ones). The discussion is coherent and thorough. I would not agree with some conclusions regarding consistency of the results. Nonetheless, as a whole the discussion is well written.

As a concluding remark I would like to address two conceptual issues. First, the dissonance was measured as experienced mood. As mentioned already the drawback of the measures used is that they did not capture a very important component of dissonance such as arousal or tension. I wonder whether the results would be different if a more appropriate measure (e.g., a physiological measure) was used to capture arousal. Second, the idea of enhancing certain values is compelling in itself. Unfortunately, the exposure to pro-environmental films was not successful in any of the studies. Maybe an effective way to enhance values would be reference to personal and social norms. I regret the aspect of norms has not been explored further in the thesis as they seem important both in the context of hypocrisy and values enhancement (see e.g., Steg et al. 2005).

Overall, despite mentioned limitations the thesis is a valuable endeavor to understand such phenomena as hypocrisy and cognitive dissonance. Therefore, in my view, the thesis fulfills the requirements for candidates in the Act on academic degrees and titles as well as on degrees and titles in the field of art (Dz.U. z 2016 r., poz. 882). I recommend farther proceeding in the process of awarding doctoral degree.

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