## Whorf fought the law (and the law won): Grammatical gender and COVID-19

Panos Athanasopoulos<sup>1</sup> & Evripidis Rizos<sup>2</sup>

<sup>1</sup>Lund University, pathan54@hotmail.com <sup>2</sup>Aristotle University of Thessaloniki, eurizos@law.auth.gr

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**Introduction:** There is ample evidence that speakers of grammatical gender languages tend to form stereotypical associations between gendered nouns and their referents (Boroditsky et al., 2003; Sato & Athanasopoulos, 2018; Mecit et al., 2022). Here, we assess the effect of grammatical gender in real-life situations within a legal context. In Greek, coronavirus is masculine and the resulting illness COVID-19 feminine, conforming to the grammatical gender of the terms 'virus' and 'illness' respectively. However, in natural usage the term COVID-19 occurs within both masculine and feminine grammatical contexts. The aim of this paper is to investigate whether the application of grammatical gender on noun phrases containing 'COVID-19' affects how legal experts and lay people apply punitive measures on breaches of laws aimed at ameliorating the spread.

**Method:** 769 Greek-speaking participants, divided by level of legal expertise into Controls (no expertise, N=212), Trainees (law students, N=355) and Experts (judges, attorneys, law academics, N=202) were asked to complete a survey presenting hypothetical breaches of real laws about pandemic related measures, divided into three types: Administrative (carrying a fine), Misdemeanour (carrying a short prison sentence) and Felony (carrying a long prison sentence). In a masculine grammatical gender context, the instructions and the questions contained masculine gendered noun phrases with the words 'coronavirus' and 'COVID-19', and in a feminine grammatical gender context they contained the words 'illness' and 'COVID-19' in the feminine form. Punitive measures varied in the severity of application on a 7-point Likert scale from least to most severe, and participants were asked to choose the appropriate fine/prison sentence for the respective breach.

**Results:** A 3(Expertise) x 3(Breach type) x 2(Gender context) mixed ANOVA with punitive measure choices converted to z scores as the dependent variable showed a significant triple interaction, F(3.48,1327)=3.25, p<0.02. Controls, but not Trainees and Experts, applied harsher punishments in masculine contexts for Administrative breaches and Misdemeanours, while all groups applied harsher punishments in masculine contexts for Felonies, with Trainees showing the least amount of bias. A subsequent analysis on scores obtained for noun phrases containing only COVID-19 in masculine and feminine grammatical contexts (i.e., without the words 'coronavirus' or 'illness') confirmed that the observed effects were indeed attributable to grammatical gender and not to the lexical semantics of specific terms (Expertise x Breach type x Gender context: F(3.6,739)=3.67, p<0.01).

**Discussion:** Our findings show that the grammatical gender context that a legal breach is presented in can be a powerful force in how people judge the severity of the corresponding punishment. Furthermore, the respondent's experiential history (defined here by level of legal expertise) also exerts a significant influence, as no effects of gender were found in Trainees and Experts except for Felonies, which involve considerable harm of perpetrator to victim and carry lengthy sentences. We discuss these findings in terms of frequency, saliency, and affect associated with the specific legal scenarios under investigation, which speak to the broader question of the mechanisms by which our language can creep into our judgments.

## References

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