

Variants of *verbal* uncertainty

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We would like to present it as a poster if it is not accepted as a paper.

Short abstract:

We suggest that speakers can communicate the source of their uncertainty by framing their prediction with either a personal mode “I am uncertain that the team will win” or with an impersonal mode “It is uncertain that the team will win”. We studied the effect of such mode on how recipients judge the prediction. We found that participants judged impersonal prediction more informative, and more based on statistical information than personal prediction. In addition participants were more willing to bet according to impersonal prediction. Findings support the existence of variants of uncertainty and that uncertain claims convey more than a probability.

Long abstract: The present research focuses on how uncertainties are communicated, understood and used. From a mathematical point of view, uncertainty can be described by numerical probabilities: numbers ranging from 0 (impossible) to 1.0 (full certainty). Yet uncertainty cannot be reduced to a point on an axis and can be characterized as well by its source. Indeed uncertainty could stem from lack of knowledge (i.e., ignorance) or from the character of events themselves (i.e., disposition of the world). As numerical probabilities, quantifiers of the natural language (e.g., there is a chance, it is almost certain) can convey different ranges of uncertainty. We suggest that these terms could reflect the source of uncertainty by means of the pronoun used to describe the uncertain state. For example one can say “I am uncertain” reflecting an internal uncertainty, whereas someone else can prefer “it is uncertain”, reflecting an uncertainty attributed to the world.

We conducted two experiments to explore how the personal and the impersonal modes of predictions (I am uncertain vs., It is uncertain) are perceived by the recipients and influence their subsequent decision making in a context of soccer game prediction. In the first experience 246 participants, non-experts on soccer, read a prediction about a match outcome and then judged its informativeness, the degree and nature of knowledge of the speaker (statistics or not), the attitude of the speaker towards the team and finally, their own willingness to bet. In a mixed design, the degree of certainty of the prediction was a within-subjects factor (low, moderate vs. high probability of occurrence) and the mode of prediction (personal vs. impersonal) was a between-subjects factor. Results indicated that predictions communicating moderate degrees of certainty (i.e., not certain) were perceived as less informative and less based on statistics than low and high ones (i.e., very uncertain and almost certain). Likewise, moderate probability terms were less encouraging to bet than low and high ones. The mode of prediction did not influence the perceived degree of

uncertainty. However, impersonal predictions (e.g., “It is almost certain that Hoffenheim will win”) were perceived as more based on statistical information than personal ones (e.g., “I am almost certain that Hoffenheim will win”). We found an interaction between mode and certainty degree showing that impersonal predictions were judged more informative when they conveyed a low degree of certainty. Finally, participants were more willing to bet on the impersonal predictions rather than on personal ones. In the second experiment (forthcoming results) we manipulated in addition the expertise of the speaker. We hypothesized that the degree of expertise of the speaker will moderate the effect of the mode of prediction on judgments and decision to bet. We also asked participants about the correctness of the prediction and the degree of responsibility if one bets as a function of the prediction and wins. Finally, we asked participants to give a reason supporting the prediction, in order to study which kind of reasons the different modes elicit (e.g., statistical reasons or causal one).

The source of certainty manipulated by means of the personal pronoun influences the inference drawn by the hearer on the speaker’s knowledge and was consequently found to influence decision making. These results show the need to take into account different dimensions of uncertainty, such as the attribution of its source, and to not consider uncertainty along the single probability frequently based dimension. Results will be discussed in the light of the phenomenological analysis of the variants of uncertainty.