

"Could we force politicians to tell the truth?" David Mountain chose this somewhat rhetorical question for the title of his article in *OpenDemocracy*<sup>1</sup>, published on January 19, 2019. Rhetorical, because on the one hand, you can imagine the law that forces decision-makers to be honest; on the other hand, there are many "buts." Apart from questions about personal freedom, including the freedom to "be dishonest," the question arises when the decision-maker is dishonest and only imprecise or misunderstood. Answering this question becomes all the more complicated the more closely we start looking at the matter. Decision-makers not only express opinions directly but take part in various decision-making bodies where the final view depends on the answers to many specific questions. This gives a lot of room for interpretation, that is, to be "not necessarily honest." The question arises as to whether we are (as a society, voters, people) utterly defenseless in the face of this problem. It turns out that not really. Making decisions, especially the important and important ones, is a process. First, different options are selected, then they are analyzed, compared by experts and / or decision-makers, and finally, a recommendation is made. The views of decision-makers compose a set of data. We can put these data together, compare each other, and synthesize the final recommendations. It seems that the analysis of these data may provide answers to the questions that bother us. The question remains, however, how to do this?

A popular (but not the only) framework for making decisions is AHP (Analytic Hierarchy Process<sup>2</sup>). AHP as a decision-making method was proposed by Thomas Saaty in 1977. Saaty's proposal is holistic. It contains a method for ranking calculation; it allows to handle many criteria. It includes built-in verification mechanisms such as inconsistency ratio, and last but not least, there is ready-to-use proprietary software supporting the method. All these factors made up for the undoubted success of AHP. The AHP method, or more generally the pairwise comparison method, provides a well-defined framework for making complex decisions. We believe it is easier to discern "strange" and "non-obvious" data behavior within this framework. We want that these "irregularities" of data bring us closer to answering the question about the honesty of decision-makers. Wouldn't it be convenient to have an algorithm (something like an oracle) that would decide who is fair and who is not? Of course, the question about the honesty of decision-makers (even limiting considerations to AHP) is not so simple that an easy-to-write algorithm would be enough for the answer. Therefore, in our research, we want to:

- analyze the different ways decision-makers (experts) can be dishonest,
- investigate the properties of the AHP method that make it easier to be unfair (unfortunately, there are probably no ideal decision methods).

Then, based on these analyzes, we would like, on the one hand,

- to eliminate situations in which dishonest behavior is facilitated (due to the type of problem, the nature of the data, etc.),

and on the other hand,

- to identify suspected cases.

For this purpose, we will create a series of simulation models corresponding to various types of decision fraud. We believe that the observation of these models will allow us to construct mechanisms for assessing the threat of attacks and methods for detecting unfair behavior. As a result, users will get tools to defend themselves against dishonest decision-makers. At least for those who use the pairwise comparisons method and AHP. We are confident that many of our ideas will apply to other decision-making methods as well.

Going back to the question from Mountain's article: "Could we force politicians to tell the truth?" We will not answer that. We believe, however, that thanks to our research, we will be closer to answering the question, who is not telling the truth and when, which is perhaps the first step to live in a more honest and predictable world.

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<sup>1</sup> <https://www.opendemocracy.net/en/transformation/could-we-force-politicians-to-tell-truth/>

<sup>2</sup> [https://en.wikipedia.org/wiki/Analytic\\_hierarchy\\_process](https://en.wikipedia.org/wiki/Analytic_hierarchy_process)