

# Evaluation of Deception For The Greater Good: Minimizing Traffic Congestion With Information Design

Steven Homer<sup>1</sup>, Fabian Perez<sup>2</sup>, Quinten Rosseel<sup>2</sup> and Matthias Humt<sup>2</sup>

<sup>1</sup>steven.t.homer@gmail.com

<sup>2</sup>{quenten.rosseel, fabian.ramiro.perez.sanjines, matthias.humt}@vub.be

## Abstract

The paper *Reducing Congestion Through Information Design* which is reviewed in the report *Deception For The Greater Good: Minimizing Traffic Congestion With Information Design* we are going to evaluation in this article, deals with the problem of suboptimal decisions of Bayesian agents in the context of games with uncertain congestions when given complete information of the system. The reviewing group developed and used a simulation software to replicate the results seen in the aforementioned paper. Their work and its presentation are evaluated in the first section of this article while remarks can be found in the second section.

## 1 EVALUATION

As we deal with three different texts throughout this evaluation it might help to assign to each of them a unique name. Therefore, if we speak of the *paper* we mean the original work by Das et al (2017) titled *Reducing Congestion Through Information Desig*. The *report* denotes the review on the aforementioned paper titled *Deception For The Greater Good: Minimizing Traffic Congestion With Information Design* written by Kaïs Albichari, Raymond Lochner, Rodrigue Van Brande and Tanguy d'Hose. Lastly we will say the *article* when speaking about the evaluation you are reading right now.

The article is organized into two parts. In this one, apart from clarifying notation, we will evaluate the different sections of the report on the basis of the questions from the specification found online and the mail the report was attached to. The second part will provide overall general positive and negative remarks as well as questions on the content of the report.

### 1.1 ABSTRACT AND INTRODUCTION

**Todo: Evaluate whether the introduction explains clearly the content of the paper**

The abstract should be more elaborated in terms of what the paper is about. Also using the term *agent* both for the entity being routed and a potential supervisory structure (mis)leading the former might be confusing. An interested reader might now, after having read the abstract, have a vague idea of the topics that are about to be discussed. We don't immediately see however why selfishness of agents in a traffic system is a motivation for the study.

The introduction provides a clear overview of the topics to be discussed but contains spelling mistakes, as does the abstract. Since this is the first impression the reader gets, we highly recommend to review the phrasing. Subsequently, the second paragraph states that the work is a 'very active topic' but the references that back up this claim are from the same author and date back to 2005. While 2005 is clearly a lot more recent than 1920, the year it is referring to, it would be good to find a more recent paper (e.g. the one that is actually being reviewed) or to remove the claim.

Otherwise the paper is well summarized, touching on all the major parts without getting carried away, so the reader feels confident to dive in. It could be a little clearer though that your work is mainly a reproduction and revisit of the original content rather than something completely novel.

## 1.2 BACKGROUND INFORMATION

**Todo: Evaluate whether there is sufficient background information to understand the relevance of the work**

The sources cited in the introduction are sufficient to understand the relevance of the work, spanning both time and topics. There is one highly influential reference added to those already present in the paper, Pigou (1920), but it remains the only one. Citing sources encapsulated in parenthesis when introducing them directly is uncommon. Strangely, *Informational Braess' paradox: The effect of information on traffic congestion* (Acemoglu et al, 2016) is cited as being published in 2017 in the paper, though 2016 seems to be correct.

## 1.3 METHODS

**Todo: Evaluate whether the methods are clearly explained (can the results be reproduced?)**

## 1.4 RESULTS

**Todo: Evaluate whether the results answer the questions asked in the paper (which questions?)**

## 1.5 QUESTIONS

**Todo: Evaluate whether all questions asked in the paper are answered (which questions?)**

## 1.6 CONCLUSION

**Todo: Evaluate whether the conclusion is sufficient**

## 1.7 STYLE

**Todo: Evaluate whether the overall style is ok**

## 1.8 MISSING CONTENT

**Todo: Evaluate whether you believe things are missing in the discussion**

## 2 REMARKS

In this section we will discuss possible ways to improve the report on the basis of some specific positive and and negative examples as well as content wise questions.

### 2.1 POSITIVE

Todo: Name 3 positive points concerning the work, clearly specifying why you think they are well-done or interesting

### 2.2 NEGATIVE

Todo: Name 3 negative points, which may include missing/unclear explanations or suggestions for improvement

### 2.3 QUESTIONS

Todo: Name at least 3 clear and relevant questions on the content or the methods used which can be asked (next to other questions)