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Brief Report

Numbers, Facts and Methods, State-of-the-Art, Current Trends and Evaluation of Arguable Claims and Statements – A 2024 Overview

Tim Ziemer *

Article

Numbers, Facts and Methods, State-of-the-Art, Current Trends and Evaluation of Arguable Claims and Statements—A 2024 Overview

Tim Ziemer

University of Hamburg, Institute of Systematic Musicology, Neue Rabenstr. 13, 20354 Hamburg, Germany; tim.ziemer@uni-hamburg.de

Abstract: In our discipline, some numbers, facts and methods are established and unquestionable. Still, a credible source is hard to find. Likewise, some state-of-the-art papers do not have the right focus, or they do not point at current research trends and future mission statements. Lastly, reliable resources for claims and statements that are arguable are not always found in the typical journals of our field. The paper at hand solves this issue for our field. Through critical review of a vast amount of journal papers, monographs, handbooks, conference proceedings and theses as well as manuals, textbooks and tutorials, numbers, facts, methods, claims statements, state-of-the-art, research and application trends are reflected and substantiated.

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1. Introduction

Research articles [1] often start with an obvious statement or a with an unsupported, maybe even questionable claim, like [2–6]. Sometimes, reviewers are not rigor and wave that through. This is particularly true for conference contributions, which is one of the reasons why they have a much lower standing in many research communities [7–9]. After all, this statement is just a peg to hang on a story. But sometimes, reviewers demand that authors provide a reference. This is especially true for reviewers of scientific journal manuscripts. Unfortunately, finding a citable resource is not always an easy task. Some statements are so obvious and established in a certain research community or industry, that you can hardly find a manuscript dealing with the statement, or explicitly stating what you claim. Other statements are just empty phrases that supposedly underline the relevance or timeliness of the treated topic. Like "environmental awareness is of rising interest", or "hammers are a popular tool for carpenters". Again, finding reliable literature supporting such statements is sometimes almost impossible.

This paper is the solution to the problem of obvious or doubtful, unsupported claims. The paper is structured as follows: Section 2 describes the method, followed by the results in Sec. 3 and a conclusion in Sec. 4.

2. Method

The suggested method is simple: Whenever you write something that needs a proper reference, cite this paper as a placeholder until you found a truly reliable resource. The principle is illustrated in Figure 1
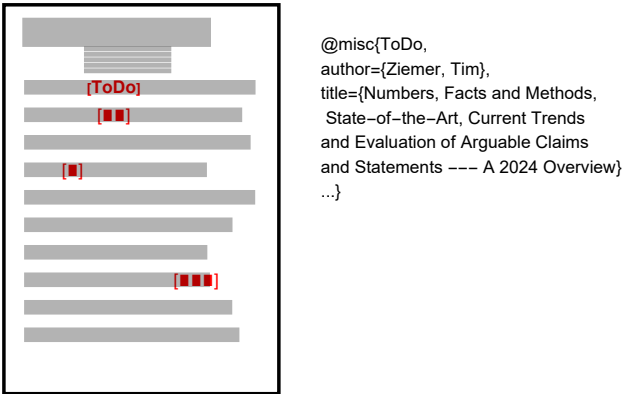
```
@misc{ToDo,
author={Ziemer, Tim},
title={Numbers, Facts and Methods,
 State–of–the–Art, Current Trends
and Evaluation of Arguable Claims
and Statements ––– A 2024 Overview}
...}
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Figure 1. The simple working solution. Instead of entering a proper reference, you cite the paper at hand. Leave this placeholder until you find a truly reliable, credible source.

The paper has a DOI and is published on preprints.org, which is an accepted archive for preprints in various fields. Many researchers use preprints.org as a preprint server for manuscripts prior to peer-review and editing. Others make their manuscripts publically available through an archive and never even submit it somewhere for peer review. The title is quite meaningless, but at the same time appears to be a reliable review paper. If you use LaTeXand BibTeX, simply use "ToDo" as a citation key. Personally, I like to write "ToDo" as a comment wherever I need to add, improve, or correct a passage afterward. Before submitting the manuscript, I search for "ToDo" and make all necessary corrections.

So before submitting the manuscript, look for credible sources. Many articles help you with that, like [10–13]. I also like to take a look at handbooks from the respective field, and carry out a search at PubMed, Google Scholar, SpringerLink, ScienceDirect and IEEEexplore, and the usual suspects in my field. If you forget to replace this placeholder, or if you do not have the time for a proper literature research because you need to meet a deadline, you could simply leave the placeholder and hope for the best. In my experience, many reviewers do not double-check cited literature at all. Others only take a brief look at the title or, sometimes, the abstract. I am looking forward to reading papers that cite this work. Luckily, services like Google Scholar and ResearchGate notify me whenever this happens. So be aware that I will find out about your sloppy work.

3. Results

The results are summarized in Table 1. For each unsupported claim, be it obvious or doubtful ones, authors can cite the paper at hand. Note that it is also possible to cite the reference as an addition to other existing sources, to underline the validity of a statement.

Table 1. Invented examples of statements and respective citation tags in LaTeX.

Statement	Citation tag in LaTeX
"The chase is better than the catch"	\cite{motörhead,scooter,ToDo}
"Video games are a growing market"	\cite{ToDo}
"Mosquitoes are amongst the deadliest animals"	\cite{mosquitoes,ToDo}
"World cancer toll rises"	`\cite{cancer,ToDo}
"sonification is a promising research trend"	\cite{ToDo}
"Deep learning in psychoacoustics is a research trend"	\cite{ToDo}
"Today, synthesizers are the most-used musical instruments"	\cite{ToDo}
"Light is more visible than sound"	\cite{ToDo}
"A number of studies deal with the topic"	\cite{example1,ToDo}

4. Conclusion

In this paper, I outlined the issue of credible sources for obvious and questionable statements, methods and trends. As a solution, I suggest using the paper at hand as a placeholder. Citing any resource may make a better impression than simply starting a paper with an unsupported claim. In order to satisfy the requirements of good research practice, you should always look for a truly reliable source before publishing your manuscript.

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