1 Paper review: There are asymptotically far fewer polytopes than we though (announcement)

The main contribution of this paper is giving an asymptotically important improve to the best known upper bound of the number of distinct simplicial polytopes with n vertices in $\mathbb{R}^d$ for $n >> d$. This paper has an excellent structure and it is very well written and easy to understand. The structure goes as following:

- Gives the strictly necessary background to the problem.

- Enounces the theorem on the upper bound to the number of simplicial polytopes.

- Proves the theorem.

The proof of the theorem is very well structured, which makes it very easy to follow. Most of it is self-contained, only the last part depends on the bibliography but it consist of applying one result to the particular case in which the mentioned proof is based. This result is a theorem of Milnor on the cohomology of semialgebraic sets. The background needed to understand everything but this theorem is some elementary knowledge of polytopes. And the tools used are some combinatorics and some elementary complexity theory. The proof seems right except for the last part when applying Milnor's theorem, the full version of the paper should be checked to study it with full detail.