Dear Editor

Thank you for reviewing our editorial entitled “The role of mixed reality in visualization of orthopedic surgical anatomy”. We are now resubmitting it, taking into account the reviewers’ and editors’ comments. Our responses are the following:

Reviewer’s comment: While the paper is well written, it is lacking depth to explain why the difference between MR and AR is important. More detailed discussion regarding the patient outcomes from use of MR/AR would be helpful.

Authors’ response: We provided further details regarding the patients’ outcomes in the studies which included such outcomes (table 1). Also, we have stated that MR has been defined as a technology which provides depth and perspective of the virtual objects, in contrast with AR. We also cited literature to show that these technologies have different anatomy teaching potential, due to the aforementioned essential difference. However, there is lack of research to compare outcomes of the implementation of those two technologies in orthopedic surgery patients. Thus, there is lack of research to prove that the aforementioned difference in perception of anatomy is translated into patients’ outcomes. We noted this lack in our conclusion and we stated that there is need for further research to this direction. Thank you.

Reviewer’s comment: Also, instead of listing each of the studies one after another, it would help if the authors could consider grouping their discussion/editorial around what papers are most consistent with the proposed definition of MR, what papers are most consistent with definition of AR, and then provide more detail regarding why distinguishing the two are important. Are the outcomes different? Is there pedagogical or educational literature that suggests one is superior to the other?

Authors’ response: We agree that it would be helpful if we grouped our discussion around what papers are most consistent with AR and MR. However, there was no paper to provide clear description of the technology used and to explicitly state if the

technology under investigation provided depth and perspective of the virtual object. Thus, a comparison between patients' outcomes after the implementation of AR or MR was not feasible. Nevertheless, we cited pedagogical literature to show that the two technologies have different anatomy teaching potential. Thus, it is reasonable to expect that this difference will be translated into different potential in visualization of orthopedic surgical anatomy. We stated that further research is needed to compare those two technologies in terms of value in orthopedic surgical practice. Thank you.

Comment: It is well written review article concise and to the point yet the conclusion is not optimum no need to redefine because the difference is clear and well known.

Authors' response: We agree that the difference is clear and we modified our conclusion. There is no need to redefine MR and AR. We explicitly stated future directions of research. Thank you.

Science editor's comment: The title is too long, and it should be no more than 18 words

Authors' response: We shortened the title, although its words were less than 18. Thank you.

Science editor's comment: The "Author Contributions" section is missing. Please provide the author contributions.

Authors' response: Dimitrios Chytas collected the data and wrote the original draft. Vassilios Nikolaou critically reviewed and edited the manuscript. Thank you.

Science editor's comment: The authors should provide some figures or tables.

Authors' response: We provided a table. Thank you**.**

Company editor-in-chief comment: Before final acceptance, the author(s) must add a table/figure to the manuscript.

Authors' response: We provided a table. Thank you**.**