

## Introduction by the Editor

During the meeting of the Editorial Board, which took place in Edinburgh last June, we discussed the idea of publishing some invited "Critical Commentaries" on debated topics written by experts in the field. I am delighted to introduce the first "Critical Commentary" by Prof Charles Greene from the University of Illinois, Chicago (UIC) on the "Functional Anatomy of the Temporomandibular Joint (TMJ)."

Prof. Greene is an academic who has been a member of orthodontic faculties 1986-1995 (Northwestern) and 2005-2018 (UIC). He also is a clinician, practicing general dentistry at least half-time throughout his career. Even though he is not an orthodontist, he has thoroughly discussed with orthodontists the debated questions regarding condylar position and TMJ function, and over the years, he has published several papers and books on these topics.<sup>1-6</sup> This paper is not addressed exclusively to orthodontists, although every effort has been made to mention how the main message could affect orthodontic thinking and practice. It is common that among orthodontists there is the belief that the mandibular condyle has some functional relationship to the glenoid fossa, and many believe that the condyle should be located in a particular position for good function. The author proposes a new perspective on this commonly believed assumption, based on a collection of anatomic static and functional facts. Indeed, this is an anatomy paper, in which the author incorporated over 50 years of his experience and scholarship in the study of the temporomandibular joint, occlusion and TMDs. The UIC was the only university in the USA during the second half of the 20th century to have a Department of Oral Anatomy, completely separate from the general anatomy department. Therefore, the author developed his expertise discussing and being in constant contact with anatomy professors well known in the field. In this paper, the author will discuss and formulate a different viewpoint about a particular functional anatomy issue involving the TMJ. This paper is deliberately limited to discussion of normal joints in dentate people, with the assumption that the disc is properly positioned; it is not discussing situations

involving disc displacements or inflammatory or degenerative joint diseases. Ultimately, we hope that the considerations raised by the author will induce the reader to critically reconsider the concepts of centric relation and optimal condylar position which are always debated in the orthodontic field.

Ambra Michelotti

Department of Neuroscience, Reproductive Sciences and Oral Sciences, Section of Orthodontics, University of Naples Federico II, Naples, Italy

### Correspondence

Ambra Michelotti, Department of Neuroscience, Reproductive Sciences and Oral Sciences, Section of Orthodontics, University of Naples Federico II, Naples, Italy.  
Email: michelot@unina.it

### REFERENCES

1. Greene CS. Point – counterpoint: relationship between occlusion and temporomandibular disorders: implications for the orthodontist. *Am J Orthod Dentofacial Orthop.* 2011;139:10-16.
2. Kandasamy S, Greene CS, Obrez A. An evidence-based evaluation of the concept of centric relation in the 21st century. *Quintessence Int.* 2018;49(9):755-760.
3. Rinchuse DJ, Greene CS. Scoping review of systematic review abstracts about temporomandibular disorders: comparison of search years 2004 and 2017. *Am J Orthod Dentofacial Orthop.* 2018;154(1):35-46.
4. Greene CS, Menchel HF. The use of oral appliances in the management of temporomandibular disorders. *Oral Maxillofac Surg Clin North Am.* 2018;30(3):265-277.
5. Greene CS, Obrez A. Treating temporomandibular disorders with permanent mandibular repositioning: is it medically necessary? *Oral Surg Oral Med Oral Pathol Oral Radiol.* 2015;119(5):489-498.
6. Reid KI, Greene CS. Diagnosis and treatment of temporomandibular disorders: an ethical analysis of current practices. *J Oral Rehabil.* 2013;40(7):546-561.