

• Systemized Orthodontic Treatment Mechanics



New book of special interest to MBT™ System users

A new comprehensive text, *Systemized Orthodontic Treatment Mechanics*, from Drs. McLaughlin, Bennett and Trevisi, will be of great interest to orthodontists worldwide, and in particular, to MBT™ System users. Entirely new, it defines the authors' current treatment philosophy, follows their easily readable style, and contains ultra-clear layouts and diagrams.

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Written by orthodontists, for orthodontists, this book provides the clinical orthodontist with an accessible and practical guide to the MBT System treatment philosophy. It brings together the four components which make up modern treatment mechanics: Bracket Design, Bracket Positioning, Archwire Selection, and Force Levels.

Chapters include:

1. A brief history and overview of treatment mechanics
2. Appliance specifications: variations and versatility
3. Bracket positioning and case set-up
4. Arch form
5. Anchorage control during tooth leveling and aligning
6. Arch leveling and overbite control
7. An overview of Class II treatment
8. An overview of Class III treatment
9. Space closure and sliding mechanics
10. Finishing the case
11. Appliance removal and retention protocols

The book was originally planned as a second edition of the first Bennett and McLaughlin text, *Orthodontic Treatment Mechanics and the Preadjusted Appliance*, published in 1993. However,

there have been so many technological changes and improvements over the past eight years that an entirely new text became necessary, supplementing the general message of the first.

A second Bennett and McLaughlin text, entitled *Orthodontic Management of the Dentition with the Preadjusted Appliance*, was published with Isis in 1997, and is scheduled to be republished with Mosby early in 2002. This book devoted a chapter to each tooth in the dentition, emphasizing clinical situations relating to each tooth. It evolved into a far more extensive project than initially intended, and required a substantial manuscript to cover the wide range of material.

The new third textbook returns to a concise format, somewhat similar in scope to the first, and replaces it. Its primary focus is on orthodontic treatment mechanics, in particular intra-arch considerations, or the maneuvers involved in alignment and maintenance of the dentition in each individual arch. These factors are dealt with in Chapter 5: "Anchorage control during tooth leveling and aligning", Chapter 6: "Arch leveling and overbite control", Chapter 9: "Space closure", and Chapter 10: "Finishing the case".

Inter-arch considerations, or the co-ordination of the upper and lower arches in three planes of space within the facial complex, are also given a greater emphasis than previously. In particular, Chapters 7 and 8 deal with Class II treatment and Class III treatment, respectively. These are extensive subjects, but an attempt is made to present a concise and up-to-date perspective on the general management of these two categories of case. Additionally, the authors review the important contribution of Dr G. William Arnett, and show how his diagnostic concepts are relevant to current MBT System diagnosis and treatment planning.

With the advent of improved orthodontic and surgical techniques, emphasis has moved away from Angle's focus on

molar relationship, and has shifted more toward the upper incisors as a starting point. In Chapter 7, the authors discuss how it is possible to base treatment planning on the position of the upper incisors, instead of using the molars or the lower incisors as a starting point. At the start of treatment planning it is possible to envision an “ideal” position for the upper incisors. For many cases treatment mechanics can then be planned to position the incisors ideally and subsequently to fit all the other teeth around this ideal position. In other cases the “ideal” incisor position will not be a realistic goal, and a less-than-ideal, but none-the-less acceptable, position for the incisors needs to be used as a basis for treatment planning.

After using the original “Straight-Wire™ Appliance” for nearly 20 years, it became important to provide modifications to the appliance to more closely complement modern treatment mechanics. This led to the development of the MBT™ System. Chapter 2 on appliance specification deals with the rationale behind the changes made in developing the appliance system. Information is given on the latest variations, as well as on the versatility of the appliance.

The bracket placement chart, developed in 1995, has been most valuable in the important area of bracket placement. The text discusses recent developments in bracket placement techniques. Renewed interest in indirect bonding, for instance, has occurred because of improved products, such as adhesives and tray materials.

Archwire technology has improved dramatically over the past eight years. The use of heat-activated nickel titanium (HANT) wires has become a vital part of the treatment system, and consequently modifications to the treatment mechanics have occurred. Information on HANT wires, along with a discussion of archwire sequencing, is presented in Chapter 5 “Anchorage control during tooth leveling and aligning”.

Since its introduction in the 1970s, attempts have been made with the preadjusted appliance to select

and use a single arch form on most patients. Even using the most frequently observed arch form in the orthodontic population, the authors identified numerous cases that were either too narrow, or over-expanded. Therefore, Chapter 4 is dedicated to the subject of arch form, and presents efficient techniques for managing arch form selection and archwire coordination.

Chapter 11 is dedicated to retention protocol, which is a new subject for this text. It gives an overview of the protocol, as well as describing the methods most frequently used by the authors.

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