

**DYNAMICS** *of* **Orthodontics**

An interactive multimedia program



**DYNAMICS** *of* **Orthodontics**

## The Challenge

**To bring innovation and exceptional quality to new concepts in continuing education using the latest technology via computer simulation.**

"Dynamics of Orthodontics" is an international multimedia project that was undertaken to present the world of orthodontics in a new and fascinating way. The objectives of the project are:

- Creation of an internationally accepted glossary to define the terms and concepts used in orthodontics and its related fields
- Demonstration of dynamic biological processes through computer-animated three-dimensional imaging of facial growth and dentition
- Support of a flexible learning method based on interactive multimedia programs to make the world of knowledge more transparent
- Clarification of complex methods in diagnosis and therapy to support treatment decision-making
- Contribution toward a knowledge management system in orthodontics that is easy to navigate
- Multilingual presentation to facilitate global collaboration.

The book/CD-ROM set Glossary of Orthodontic Terms - which has received the endorsement of the World Federation of Orthodontists (WFO) - is the foundation of the "Dynamics of Orthodontics" project because it contains the fundamental information necessary for knowledge navigation.

The video programs provide insight into the fascinating dynamics of facial growth and development of the dentition through 3-D animation of a quality never before attained.

The CD-ROM programs complement and expand on the contents of the videos by addressing special topics - such as biomechanics, diagnosis, and appliance therapy - in a more comprehensive fashion. In addition, the CD-ROMs help users identify deficiencies in their knowledge and then use computer-based training to address these gaps.

We would like to take this opportunity to thank our international team of experts, scientists, and practitioners for their dedication and commitment to this project, which we hope will add an exciting new dimension to the study of orthodontics.



Horst-Wolfgang Haase

Quintessenz Publishing Group



Axel Winkelstroeter

Dentaurum



Mark S. Pace

### The Result

**Competence on an international scale at the highest level possible in the world of orthodontics.**

## Editors



F. P. G. M.  
van der Linden



W. R.  
Proffit



J. A.  
McNamara, Jr.



R. R.  
Miethke

## National Collaborators



Ch.  
Bolender



J. Durán  
von Arx



K.  
Faltin




F. A.  
Miotti



H. G.  
Sergl

## Experts - Editors



 Frans P. G. M. van der Linden

received his orthodontic education at the University of Groningen (Netherlands), the University of Vienna (Austria), and the University of Washington, Seattle, (USA).

From 1962 to 1995 he was Professor and Chairman of Orthodontics at the University of Nymegen (Netherlands).

He was the initiator and coordinator of the Erasmus program for postgraduate education in orthodontics which, since its introduction in 1962, has been implemented worldwide.

His main interest is incorporating basic and clinical research results into the theory and practice of orthodontics.

He has published more than 175 papers and 10 books including a series of 6 textbooks on orthodontics.

## Experts - Editors



 **William R. Proffit**

received his dental training at the University of North Carolina (USA), a PhD in physiology from the Medical College of Virginia, and a MS degree in orthodontics from the University of Washington (USA).


Since 1975 he has served as Professor and Chairman of the Department of Orthodontics at the University of North Carolina School of Dentistry, and in 1992 he was named Kenan Professor, a distinguished professorship in the university.

He is the author of Contemporary Orthodontics, now the most widely used textbook in orthodontics, and co-author of two books on surgical orthodontics.

Other publications include some 125 scientific papers in refereed journals and more than 20 book chapters and invited contributions.

## Experts - Editors



 **James A. McNamara, Jr.**

received his dental and orthodontic education at the University of California, San Francisco (USA), and a doctorate in anatomy from the University of Michigan (USA).

He serves as the Thomas M. and Doris Graber Endowed Professor of Dentistry in the Department of Orthodontics and Pediatric Dentistry, Professor of Cell and Developmental Biology in the University of Michigan Medical School, and Research Scientist at the Center for Human Growth and Development.

He has published more than 150 articles and serves as Editor-in-Chief of the 36-volume Craniofacial Growth Monograph Series published through the University of Michigan.

## Experts - Editors



 **Rainer R. Miethke**

received his education in dentistry and orthodontics at the Freie Universität Berlin (Germany) and at Louisiana State University (USA) under Dr Hickham.

He held the position of Professor and Chairman of the Department of Orthodontics and Pedodontics at the Freie Universität Berlin from 1983 to 1994.


Since 1994 he has served as Chairman of the Department of Orthodontics and Dentofacial Orthopedics at the Charité, Humboldt-Universität zu Berlin.

His main interests are development, retention and relapse, functional orthodontics, and bonding procedures.

He has published more than 120 articles and is author or co-author of 7 books.

## Experts - National Collaborators



 **Charles J. Bolender** (France)

received his orthodontic education at the University of Strasbourg.

From 1970 to 1999 he served as Professor and Chairman of the Department of Orthodontics at the University of Strasbourg, France, where he was also the Head of the Postgraduate Specialty Training Department since its creation in 1979.

His main interests are dentofacial paleopathology, craniofacial embryology, and development biology, as well as clinical application of basic research in the practice of orthodontics.

He has published numerous papers on orthodontics and related subjects.



## Experts - National Collaborators



 **José Durán von Arx** (Spain)

received his medical, dental, and orthodontic training at the universities of Barcelona, Madrid (Spain), and Buffalo (USA).

He served as director of the Orthodontic Department of the Children's Hospital in Barcelona and in teaching positions in pedodontics and orthodontics at the University of Barcelona, where he has been Chairman and Professor of Orthodontics since 1986.

His main interests are in functional appliances and electromyographical responses to treatment.

He has published 3 books and more than 100 articles.

## Experts - National Collaborators



 **Kurt Faltin** (Brazil)

received his orthodontic education at the University of Bonn (Germany).

He served as Professor in Orthodontics at the University of Mogi das Cruzes from 1971 until 1984.

Since 1985 he has held the position of Professor and Chairperson of the Department of Orthodontics at the University Paulista-UNIP in Sao Paulo (Brazil). In addition, he is Guest Professor at the Facial Orthopedic Department at the University of Ulm (Germany).

His main interests are individual diagnosis and clinical research on results of different treatment methods.

He has published 4 books, 6 chapters, and more than 50 papers.

## Experts - National Collaborators



 **Francesca Ada Miotti** (Italy)

received both her medical and dental Education at the university of Padova (Italy), and her orthodontic Training at the University of London (UK).


Since 1986 she has been Professor and Chairperson of Orthodontics at the School of Dentistry and at the postgraduate School of Orthodontics at the University of Padova (Italy).

Her main interests include craniofacial anomalies, interceptive orthodontics, and educational issues.

She has published extensively in national and international journals.

## Experts - National Collaborators



 **Hans G. Sergl** (Germany)

received his dental education at the University of Munich (Germany) and his orthodontic education at the University of Erlangen-Nürnberg (Germany).

In addition, he holds a university degree in psychology. Since 1974 he has served as Professor and Head of the Orthodontic Department of the Mainz University Dental School.

His main interests regard functional jaw orthopedics, functional adaptation, functional disorders, habits, motivation, psychological aspects of orthodontics, psychology in dentistry, and esthetics.

He has published 2 textbooks and more than 100 articles.

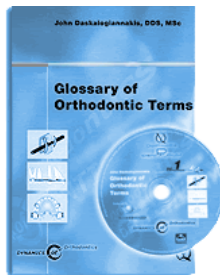
## Volumes

Media	Volume Title	Languages available
	<b>Vol. 1: Glossary of Orthodontic Terms</b> Daskalogiannakis	
	<b>Vol. 1a: Multilingual Glossary of Orthodontic Terms</b> Daskalogiannakis et al.	
	<b>Vol. 2a: Facial Growth</b> Van der Linden, McNamara, Radlanski	
	<b>Vol. 2b: Facial Orthopedics</b> Van der Linden, McNamara, Pancherz, Proffit	
	<b>Vol. 3a: Normal Development of the Dentition</b> Van der Linden, Radlanski, McNamara	
	<b>Vol. 3b: Malocclusions and Interventions</b> Van der Linden, Radlanski, McNamara	
	<b>Vol. 4: Orofacial Functions</b> Van der Linden, Proffit	
	<b>Vol. 5: Facial Growth, Dentition and Function</b> Proffit, Van der Linden, McNamara, Radlanski, Pancherz	
	<b>Poster 1 - 4</b> Format 60 x 40 cm	

## Volumes



### Vol. 1: Glossary of Orthodontic Terms Daskalogiannakis



Have you ever had trouble communicating effectively with another member of your team or explaining a complicated concept?

This long-awaited glossary, which comes as a book and CD-ROM set, contains over 2,800 definitions of terms and concepts pertaining to orthodontics and its related fields. Definitions are accompanied where appropriate by clearly drawn illustrations.

Setting a standard as a reference source for orthodontists worldwide, the Glossary of Orthodontic Terms is an essential resource for graduates and undergraduates, dental students, and all health professionals who work in collaboration with orthodontists. A wealth of current, concise, clinically relevant information is concentrated into a single volume.

The Glossary of Orthodontic Terms has been endorsed by the World Federation of Orthodontists:



"The WFO has attached its logo and endorsement to this work with care and pride. We believe the glossary will help both the WFO and the orthodontic scientific community achieve a mutual goal of effective communication in orthodontics worldwide."

- [Download Glossary Demo](#) (8,5 MByte)
- [Show Tutorial](#) (Shockwave, 800 kByte)

Languages available:



Media

Book with CD-ROM

## Volumes



### Vol. 1a: Multilingual Glossary of Orthodontic Terms Daskalogiannakis et. al.



The globalisation of scientific information and of markets is having a fundamental impact on medicine and dentistry. International exchange of knowledge and information requires facilitation and support. Although English is widely used as the international language of science, translation problems with highly specialized terminology - as is used in orthodontics - often occur. This multilingual glossary now provides orthodontists and related specialists worldwide with an effective tool for communication in six languages.

- Easy to use
- Six languages: English, Spanish, French, German, Italian, Portuguese
- Fully interactive

#### Minimum System Requirements:

Pentium-class processor with 500 MHz

System memory: 128 megabytes RAM

Operating system: Windows 98 / ME / 2000 / XP (32 bit systems only)

Video card supporting a resolution of 1024 x 768 pixels at 16 bit color (high color)

8x CD-ROM drive

50 MB free hard disk space

Languages available:



Media

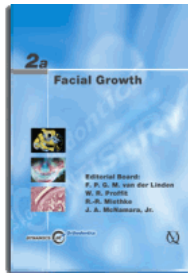
CD-ROM

## Volumes



### Vol. 2a: Facial Growth

Van der Linden, McNamara, Radlanski



The essentials of facial growth relevant to clinical orthodontics are presented and the biological factors underlying different craniofacial growth patterns are explained. Special attention is given to the role of functional components in skeletal development.

- Factors that determine growth patterns
- Causes of variation in growth
- Current views on facial growth

#### Minimum System Requirements:

Pentium-class processor with 500 MHz

System memory: 256 megabytes RAM

Operating system: Windows 2000 or XP (32 bit systems only)

Video card supporting a resolution of 1024 x 768 pixels at 16 bit color (high color)

DVD-ROM drive

50 MB free hard disk space

Languages available:



Media

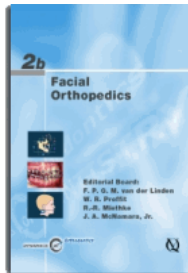
DVD-ROM



## Volumes

**Vol. 2b: Facial Orthopedics**

Van der Linden, McNamara, Pancherz, Proffit



Methods of influencing facial growth to reach treatment goals are presented, and the modes of action as well as their long-term effects are elucidated. Multiple clinical examples demonstrate the results that can be obtained from various facial-orthopedic procedures.

- How and when to treat
- Validity of facial orthopedics
- Long-term effects

**Minimum System Requirements:**

Pentium-class processor with 500 MHz

System memory: 256 megabytes RAM

Operating system: Windows 2000 or XP

Video card supporting a resolution of 1024 x 768 pixels at 16 bit color (high color)

DVD-ROM drive

50 MB free hard disk space

Languages available:



Media

DVD-ROM

## Volumes



### Vol. 3a: Normal Development of the Dentition

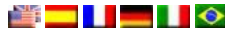
Van der Linden, Radlanski, McNamara



For the first time ever, the development of the dentition is presented in virtual reality using sophisticated computer technology. Three-dimensional views provide fascinating insights into this complex process. Factors that affect the way the dentition develops in the growing face are clarified, and the role of function is emphasized.

- The dentition in virtual reality
- Three-dimensional views

Languages available:



Media

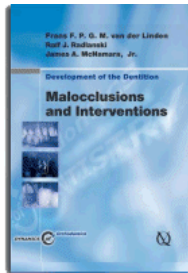
VHS-Tape (3a)  
DVD-Video (3a+b)

## Volumes



### Vol. 3b: Malocclusions and Interventions

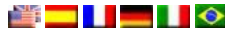
Van der Linden, Radlanski, McNamara



For the various types of malocclusions, the primary factor and the associated deviations that result are described. Interceptive procedures leading to spontaneous corrections and favourable conditions to initiate orthodontic treatment are presented. Newly developed clinical procedures are demonstrated.

- A new perspective on malocclusions
- Effective interceptive procedures
- Excellent clinical demonstrations

Languages available:



Media

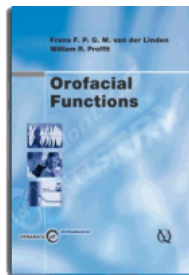
VHS-Tape (3b)  
DVD-Video (3a+b)

## Volumes



### Vol. 4: Orofacial Functions

Van der Linden, Proffit



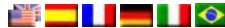
Understanding the functional aspects of the orofacial region is a prerequisite for arriving at a proper diagnosis and planning treatment for orthodontic patients. The ultimate morphology of the skeleton and the arrangement of the teeth are mainly determined by facial growth and the development of the dentition, on which functional aspects have a large influence. The mode of breathing, the position of the tongue, lips, and cheeks, the interdigitation of the posterior teeth, and the forces provided by the occlusion all contribute to the developmental process.

Functional aspects affect orthodontic therapies, influence the result that can be achieved, and determine to a large extent the changes that occur in the dentition when retention devices are discarded.

#### Outline

- Oral aspects of breathing, swallowing, and speaking
- Tooth eruption and movement
- Effect of occlusion on tooth position
- Equilibrium concepts regarding the dentition
- Therapeutic procedures for abnormal oral behavior

Languages available:



Media

VHS-Tape  
DVD-Video

**DYNAMICS** of **Orthodontics**

An interactive multimedia program

Volumes: 1 1a 2a 2b 3a 3b 4 5 Poster Prices Order

## Volumes

**Vol. 5: Facial Growth, Dentition and Function**

Proffit, Van der Linden, McNamara, Radlanski, Pancherz



This DVD-ROM contains an interactive computer based training (CBT) program to increase the understanding of the information provided in the various DVD's of "Dynamics of Orthodontics". For each section 30 questions have been formulated. The feedback from the program tells the user if he is right or wrong, and why. Each section can be dealt with separately and is concluded with presenting the level of performance achieved.

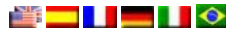
**Contents:**

1. CBT: Facial Growth (Vol.2a)
2. CBT: Facial Orthopedics (Vol.2b)
3. CBT: Normal Development of the Dentition (Vol.3a)
4. CBT: Malocclusions and Interventions (Vol.3b)
5. CBT: Oral Facial Functions (Vol.4)
6. CBT: Combination and Integration of all DVD's

**Minimum System Requirements:**

Pentium-class processor with 500 MHz  
System memory: 256 megabytes RAM  
Operating system: Windows 2000 / XP  
Video card supporting a resolution of 1024 x 768 pixels at 16 bit color (high color)  
DVD-ROM drive  
50 MB free hard disk space

Languages available:



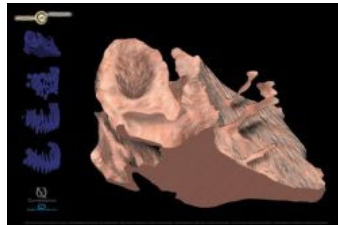
Media

DVD-ROM

## Volumes

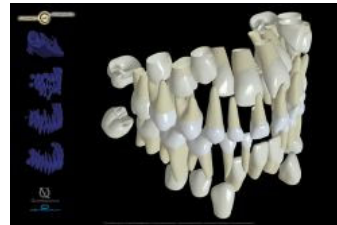
### Poster Gallery

**Poster 1**



**zoom**  
"Tooth bud of an incisor of an embryo of six weeks"  
Format: 60 x 40 cm

**Poster 2**



**zoom**  
"First transitional period"  
Format: 60 x 40 cm

**Poster 3**



**zoom**  
"Second transitional period"  
Format: 60 x 40 cm

**Poster 4**



**zoom**  
"Permanent Dentition with erupting third molars"  
Format: 60 x 40 cm

## Imprint

### Editorial Board

Frans P. G. M. van der Linden  
Rainer R. Miethke  
James A. McNamara, Jr.  
William R. Proffit

### National Collaborators

Charles J. Bolender (France)  
José Durán von Arx (Spain)  
Kurt Faltin (Brazil)  
Francesca A. Miotti (Italy)  
Hans G. Sergl (Germany)

### Authors:

John Daskalogiannakis  
James A. McNamara, Jr.  
Hans Pancherz  
William R. Proffit  
Ralf J. Radlanski  
Frans P.G.M. van der Linden

The interactive multimedia program "Dynamics of Orthodontics"  
is a joint project of Quintessence and Dentaureum.

### Quintessenz Verlags-GmbH

Geschäftsführender Gesellschafter: Dr. h. c.  
Horst-Wolfgang Haase, Christian Haase  
Geschäftsführer: Dr. rer. biol. hum., Dipl.  
Wirt. Ing. Alexander Ammann  
Verlagsleiter: Johannes Wolters

Postfach 42 04 52; 12064 Berlin  
Ifenpfad 2-4; 12107 Berlin

Tel. +49 (0) 30 / 7 61 80-5  
Fax. +49 (0) 30 / 7 61 80-692

Web: [www.quintessenz.de](http://www.quintessenz.de)  
E-Mail: [info@quintessenz.de](mailto:info@quintessenz.de)

Registergericht: Berlin 93 HRB 15.582  
USt-IdNr.: DE 136 627 147

### DENTAURUM GmbH & Co. KG

Persönlich haftender Gesellschafter:

Jochen P. Winkelstroeter  
Geschäftsführer:  
Jochen P. Winkelstroeter,  
Axel Winkelstroeter,  
Mark S. Pace

Sitz der Gesellschaft:  
Turnstraße 31  
75228 Ispringen, Deutschland

Tel.: +49 (0) 7231 / 803-0  
Fax.: +49 (0) 7231 / 803-295

E-Mail: [info@dentaureum.de](mailto:info@dentaureum.de)  
Web: [www.dentaureum.de](http://www.dentaureum.de)

Amtsgericht Mannheim HRA 500957  
USt-ID Nr.: DE 144 178 535

© 2000-2017 Quintessenz Verlags-GmbH, Berlin