Restorative Dentistry

To Charlotte, Matthew and Christopher – may their dreams come true.

Restorative Dentistry

An Integrated Approach

Second Edition

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Blackwell Munksgaard, formerly an imprint of Blackwell Publishing, which was acquired by John Wiley & Sons in February 2007. Blackwell's publishing programme has been merged with Wiley's global Scientific, Technical, and Medical business to form Wiley-Blackwell.

Editorial offices:
Blackwell Publishing Ltd, 9600 Garsington Road, Oxford OX4 2DQ, UK
Tel: +44 (0)1865 776868
Blackwell Publishing Professional, 2121 State Avenue, Ames, Iowa 50014-8300, USA
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Blackwell Publishing Asia Pty Ltd, 550 Swanston Street, Carlton, Victoria 3053, Australia
Tel: +61 (0)3 8359 1011

First published 2008 by Blackwell Munksgaard

ISBN: 9781405167994

Library of Congress Cataloging-in-Publication Data

Restorative dentistry : an integrated approach / Peter Jacobsen. – 2nd ed.
p. ; cm.
Includes bibliographical references and index.
ISBN: 978-1-4051-6799-4 (pbk. : alk. paper)
1. Dentistry, Operative.
[DNLM: 1. Dental Restoration, Permanent. WU 300 AR435 2008] I. Jacobsen, P. H. (Peter H.)
RK501.R473 2008
617.6–dc22
2007032687

A catalogue record for this title is available from the British Library

Set in 9/11.25pt Sabon by Aptara Inc., New Delhi, India
Printed and bound in Singapore by Markono Print Media Pte Ltd

The publisher's policy is to use permanent paper from mills that operate a sustainable forestry policy, and which has been manufactured from pulp processed using acid-free and elementary chlorine-free practices. Furthermore, the publisher ensures that the text paper and cover board used have met acceptable environmental accreditation standards.

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Preface

This book began life in the mid-1980s when three friends mused about the state of the world as they walked around a churchyard in Northleach, Gloucestershire, after a very good lunch in a restaurant long since gone. The product was 'Conservative Dentistry – an Integrated Approach' published by Churchill Livingstone in 1990. The intention of that book was to distil the essentials of the subject and merge them with the appropriate aspects of the supporting sciences to try to avoid the compartmentalisation of dental education and show the relationships that extend from oral biology, oral pathology and dental biomaterials into clinical practice.

The original book was expanded in the mid-1990s and was published as 'Restorative Dentistry – an Integrated Approach' by Butterworth–Heinemann in 1998. This book sold well but is now clearly past its sell by date – hence this new edition.

The new book embraces the new and, I hope, retains the old where this has been seen to be clinically successful and relevant to modern practice. The practice of dentistry has gone through many transitions in its history and the present time is no different. There is the saying 'What goes around, comes around' and this applies to dentistry too.

So, Dear Reader, please indulge this old man in the autumn of his career with a little time for reflection on the 20 years since his first book was published and the 40 years since he qualified.

A trip down memory lane into the textbooks and writings of the late Victorian era and early part of the twentieth century provides a fascinating historical perspective on what our professional forefathers thought and did. It may come as a shock to read that many of the principles we expound now were expounded then. Bridgework was taught as needing high standards of construction with an appreciation of the role of the occlusion and the need for sound abutments. Today's strategy for the management of periodontal disease is the same as that practised in 1900 though the role of the occlusion in causing the disease, prevalent in the 1960s, has gone.

The overriding impression is that our forefathers were just as clever as us, sometimes cleverer, but they were restricted by their materials and equipment. Look at the Bing Bridge of 1868. It is instantly recognisable as a resin-retained bridge with wings and a pontic but instead of being glued on, it was pinned on. There were no air turbines, no polymers; there were arsenic root fillings and poor local analgesics. In the early twentieth century, all the precision retainers we would recognise today had been designed for the then preferred 'removable bridgework'.

As a student in the 1960s, I learnt the Baldwin technique of glueing in an amalgam restoration with a wet mix of zinc phosphate cement. What are the Young Turks doing now? – glueing them in with polymers.

The cycle of ignorant rediscovery continues. Fifty years ago deep caries was managed by superficial removal and then the placement of a tannic acid dressing to 'harden' the dentine. Six months later the tannic acid was removed and the tooth restored. Today we have the 'new' 'stepwise' excavation of caries.

The quest for aesthetic restorations has led to 'amalgam-free' dental practices and the prescription of polymeric composites for all intracoronal restorations. Milled ceramics with CAD/CAM technology have arrived together with durable adhesives. The Young Turks now reject dentine pins and post crowns – see one and glue one! How much longer will the principles of the preparation geometry of near-parallelism be taught for crown retention?

Endosseous implants represent the biggest development of the last 20 years. How long will it be before endodontics disappears? Crown-retained bridgework with its use of dubious abutments is also a candidate for the history books.

The practice of dentistry and indeed the teaching of dentistry is about managing transitions – silicates to composites, copper rings to elastomers, vulcanite to acrylic. But there is a need to beware of false dawns – the self-polymerising filling materials of the 1950s, the sandwich technique of the 1980s, multiple 'generations' of dentine adhesives, discarding gold inlays – and dental academics have to be conservative with a small 'c'. It is no use allowing the Young Turks to take over with their revolutionary ideas only to find that 2 or 3 years of students have qualified not knowing techniques that turn out to be still fundamental; you cannot call them back and start again!

Modern educational theory reveals the difficulty that all learners have in making links between 'boxes' of information that are actually connected but are taught in 'modules'. This problem is compounded by the modular style of education now provided in most schools in the United Kingdom. Dentistry, of course, has a multitude of these boxes and it seems to be taking longer for students to establish the links between the boxes – to 'integrate' the information. Students seem to finish one year of study and pass on to the next, consigning the first to the filing cabinet, without realising the importance of the 'continuum of dental education'.

The 'Integrated Approach' attempts to develop the links that make for success in restorative dentistry.

This new edition of the book tries to balance the old tried and tested with the new kids on the block. It tries to hit the moving target of developments in materials without losing the basic techniques that have served our patients well and will continue so to do. The days of molar endodontics and conventional bridgework may be numbered but until many more dentists are trained in the use of implants, messing about up root canals and trying to cut parallel-sided preparations will still be required.

P.H.J.
Cardiff 2007.