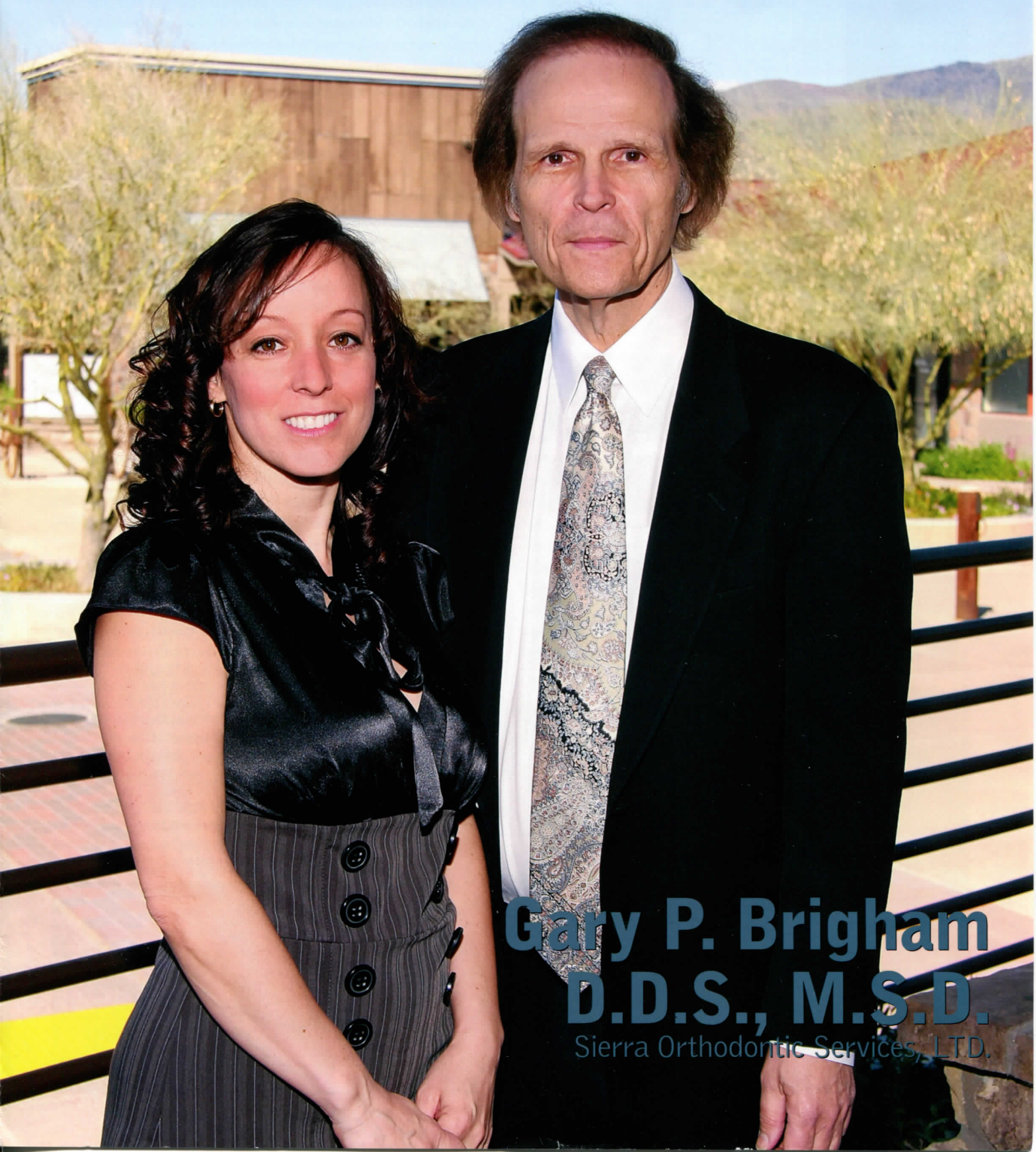


DOCTOR *of* DENTISTRY

A BUSINESS AND LIFESTYLE MAGAZINE FOR DENTISTS



Gary P. Brigham
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Gary Brigham, D.D.S., M.S.D.

At the Forefront of 21st-Century Orthodontics

By Cathy Marley

Until the last decade preceding the 21st century, the linear growth of the orthodontic profession was kept in place by traditional beliefs in its limited impact on oral environments. As the profession has grown increasingly more aware of the potential impact that oral health has on an individual's overall health and quality of life, treatment plans have increasingly addressed such issues as the impact of maxillary arch form on nasopharyngeal airway capacity and the connection between periodontal health, cardiovascular health and general well-being. Gary Brigham, D.D.S., M.S.D., has focused on incorporating this information into the treatment he is providing for his patients, who range in age from 3 to 70 and older. In doing so, he is an active participant in the changing face of orthodontics as it addresses the new realities of the 21st-century orthodontic practice.

ONE OF THE TOP 100 INVISALIGN CLINICAL PRACTITIONERS IN THE NATION

One of the most significant examples of this change in Dr. Brigham's practice is his use of Invisalign, a treatment modality that involves a series of clear, removable aligners that orthodontic practitioners use as an alternative to traditional metal braces. Dr. Brigham has been treating patients with Invisalign since it was first introduced in 1998, and he is one of Invisalign's most enthusiastic supporters. "I have found that Invisalign treatment is unquestionably more compatible with the lifestyle of the 21st-century orthodontic patient, who is more active, social and mobile than those of the past several decades. For example, one of its distinctive advantages is that there are no orthodontic emergencies with Invisalign. On the rare occasion when a patient has misplaced or distorted an aligner, regardless of the patient's location, they

are instructed to simply move on to the next aligner. The inconvenience of an unanticipated office visit is eliminated — period." That benefit alone makes the product ideal for his increasingly varied mix of clients. Dr. Brigham's Invisalign patients represent all occupations and include teens and baby boomers, as well as Hollywood starlets and London executives. All appreciate the convenience of using Invisalign, with orthodontic appointments of duration and frequency that can be customized to their personal schedules while meeting their treatment goals.

From a biomechanical standpoint, Dr. Brigham appreciates the fact that Invisalign affords control over the velocity of tooth movement. Where traditional braces dictate an average monthly movement of approximately 1 millimeter, Invisalign treatment can be modified to exert as little as 0.12 mm per tray. Under such physiologically compatible force levels, capillary blood flow in the periodontal ligament remains normal (not greater than capillary pressure of 20 to 26 gm/cm²). Moreover, treatment progress can be controlled further by the frequency with which aligners are exchanged. Because the threshold of sensitivity varies among patients, this advantage is significant and unique to Invisalign. The aligners also address cosmetic issues created by lost or congenitally missing anterior teeth. For example, an acrylic pontic that matches the color and morphology of the adjacent teeth can be added to each tray to replace a missing anterior tooth, the appearance of which is of critical aesthetic importance to most patients.

Dr. Brigham is one of only three doctors in the Phoenix metropolitan area who have received Elite Premier Provider recognition from Invisalign, an achievement that applies to less than 1% of all Invisalign practitioners in North America. Dr. Brigham is unequivocal with regard to his use of Invisalign in his practice. "There are two factors that I believe

have contributed significantly to our practice's success with Invisalign. First, no attempt is made to address orthodontic challenges with the product where it is clear that the chances for success are minimal. It cannot, for example, correct skeletally based malocclusions alone, and in some cases, a combination of treatment that begins with fixed appliances and finishes with Invisalign is the ideal treatment protocol. Secondly, developing a consistent and highly detailed ClinCheck — the process that defines and determines the velocity and staging of tooth movement and its final position — is the very basis for success with this treatment modality. The final result is a direct measure of the detail with which the ClinCheck is formulated."

Gary P. Brigham, D.D.S., M.S.D., and staff



PHOTO BY MARK SQUIRE

PHASE I TO INVISALIGN

Consistent with the expanded parameters of 21st-century orthodontics, Dr. Brigham often

Clinical staff

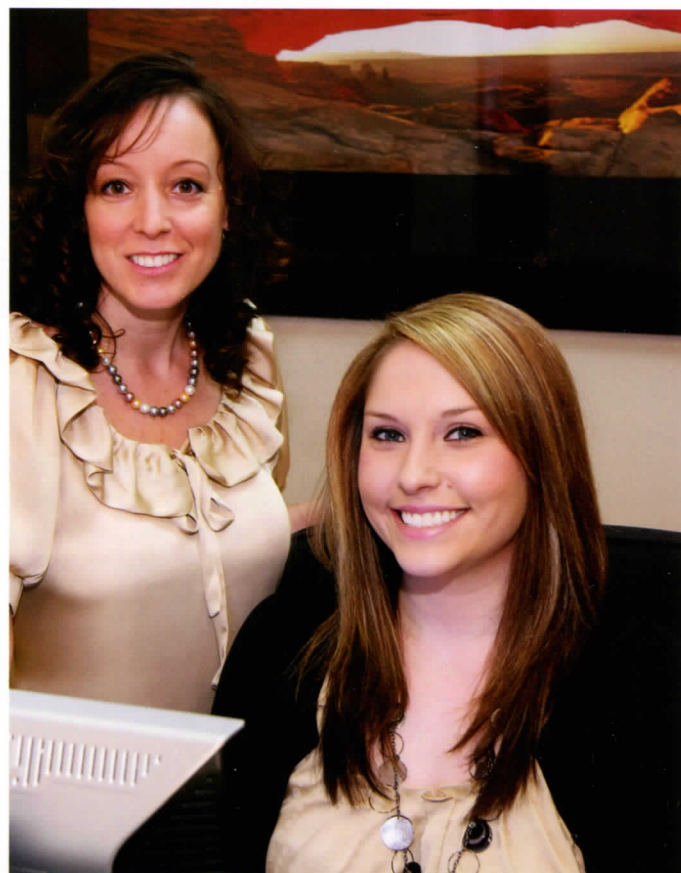


works with very young patients, some as young as 3-½ years of age. The objective of such early treatment is to identify and immediately address craniomandibular or orofacial disharmonies and aberrant habits that negatively impact the developing orofacial environment and craniofacial complex. With very young patients, early treatment with simple and efficient appliances corrects habits such as tongue thrusting, thumb sucking and crossbites. When left unattended, these maladies can develop into more complicated skeletal malocclusions, subsequent craniomandibular disorders, and compromised nasopharyngeal airspace and turbinate distortion that undermine an individual's capacity for nasal breathing.

Specifically, with Phase I treatment cast within the framework of 21st-century orthodontics and dentofacial orthopaedics, the emphasis has gravitated toward altering the conditions that determine the pattern of occlusal development rather than altering the occlusion directly. This approach is in stark contrast to traditional late orthodontic treatment philosophies, where teeth are oftentimes moved to camouflage a disharmonious face. The significant benefit of regarding early Phase I treatment patients as potential candidates for Invisalign is that the transition from early/mixed dentition to the permanent dentition can be controlled and guided so that Invisalign can be used to finalize the arch form, occlusion and aesthetic finish. Accordingly, fixed appliances of any kind can be summarily avoided. More importantly, the Phase I to Invisalign approach can produce exceptional results with minimized effort.

"Working with young children and preteens is always rewarding," says Dr. Brigham. "Long-term follow-through translates to establishing long-term relationships with these patients. You become involved with their lives rather than their mouths, and the relationships that evolve from this type of long-term interaction are priceless."

Alicia Smith, Office Manager, and Tristan Parker, Invisalign coordinator



TEENS ARE IDEAL CANDIDATES FOR INVISALIGN

The excellent results Dr. Brigham has been able to achieve with younger patients have contributed significantly to his reputation as a recognized expert in Invisalign orthodontic treatment for teens. Having already treated over 180 teens with Invisalign, Dr. Brigham was invited to participate in Align Technology's Invisalign Teen pilot program that was initiated in April 2008, to introduce a new aligner with features specifically designed to address the needs of 21st-century teen patients. His success with teen patients received broad recognition in November 2008, when Align Technology introduced its new Invisalign Teen product to the worldwide orthodontic community. The company invited Dr. Brigham to deliver the keynote address to the international attendees at the company's Invisalign Summit in Las Vegas, NV.

Since its introduction, Dr. Brigham has included his personal experience with Invisalign Teen in his presentations on Invisalign to other dentists and orthodontists across the country. The product was designed to specifically address previously expressed concerns from orthodontic practitioners with regard to compliance, erupting permanent dentition, and root torque and control. It includes compliance indicators on each aligner that assist in gauging aligner wear time, and six free replacement aligners in the event of loss or distortion. Perhaps most important to doctors and parents alike, Invisalign Teen eliminates the self-consciousness often associated with fixed appliances, presents no interference with sports or musical instruments, and does not result in the decalcification marks sometimes associated with patient negligence in cleaning fixed appliances.

TEACHING AND MENTORING DENTAL COLLEAGUES

Deeply committed to assisting other orthodontic and dental professionals in enhancing their skills with Invisalign, Dr. Brigham teaches and mentors his colleagues in the ClinCheck process without compensation. He often travels across the country to present workshops for study clubs or to lecture to groups of orthodontists, general dentists and hygienists with regard to the techniques necessary to generate successful Invisalign results. His three primary workshops — Incorporating Invisalign into the 21st-Century Practice, Invisalign Teen and Phase I to Invisalign — have been enthusiastically received across the United States, from Los Angeles to New York City.

In March 2009, Invisalign honored Dr. Brigham's commitment to teaching and mentoring his peers by awarding him its first annual Everyday Hero Award. "Our relationships with one another are an ongoing process from which we can learn a great deal about ourselves. I don't believe we meet anyone by chance," says Dr. Brigham. "I sincerely appreciate Invisalign's recognition, but I suspect that I have benefited far more from these professional interactions than those whom I have instructed or assisted."

THE 21ST-CENTURY PRACTICE

"The entire dental profession has undertaken a comprehensive paradigm shift over the past decade," says Dr. Brigham. "This has been particularly true for orthodontics. As new technology has been introduced, refined and proven more effective and efficient, orthodontic methodology has clearly changed and will continue to change orthodontic delivery systems. In addition, there has been an increasing collaborative effort among dental professionals — particularly



Date: 01/09/2004
DR. Brigham



Date: 09/21/2004
DR. Brigham



DATE: 12/28/2006
Dr. Brigham



Case 1: This 3½-year-old patient presented with a lateral tongue thrust accompanied by an asymmetric anterior open bite and severe cant to the anterior incisal plane associated with a previous thumb-sucking habit. An anti-tongue thrust appliance was placed for eight months, and two years later a follow-up visit demonstrated incisal stability and permanent resolution of the aberrant tongue pattern. If tongue habits are left untreated, longer treatment time becomes necessary to eradicate these problems. These habits are readily intercepted until the approximate age of 9, where these abnormal reflex responses may become embedded permanently.

among orthodontists, cosmetic dentists, maxillofacial surgeons and periodontists — to coordinate the creation of optimally functional and aesthetic oral environments that are stable and supportive of general health and well-being.” Patient expectations are changing as well. As patients remain vital and healthy well into their 70s and beyond, they have become better educated with regard to the interrelationships between oral and general health. “I used to be old, but I didn’t like the style,” offered a 72-year-old patient. Accordingly, they are increasingly turning to Invisalign and orthodontic practitioners like Dr. Brigham to correct collapsed arches, steep interincisal angles that fracture anterior teeth and generate symptoms of TMD, and dental crowding that has become progressively problematic.

BACKGROUND, EDUCATION AND EXPERIENCE

In addition to his Doctor of Dental Surgery degree and Orthodontic Specialty Certification, Dr. Brigham earned a Master of Science degree in Immunology at Case Western Reserve University in Cleveland, OH. For his research, he was awarded the Harry Sicher Award from the American Association of Orthodontics. In addition, he completed a Postdoctoral Fellowship in Craniofacial Anomalies at the Center for Craniofacial Anomalies in Chicago, IL, where he served as Assistant Professor of Pediatric Medicine at the Abraham Lincoln School of Medicine at the University of Illinois Medical Center. He completed one year of a Ph.D. program in biological chemistry and nutrition at the University of Illinois in Chicago that was interrupted when the U.S. government sent him to Tokyo, Japan. Upon his return, he became certified by the Foundation for Advanced Continuing Education for a postgraduate study in comprehensive clinical orthodontics.

Dr. Brigham is an Elite Premier Provider of Invisalign, with over 700 patients treated. For the past four years, he has lectured across the United States to orthodontists and dentists on all aspects of Invisalign treatment. Last November, he delivered the keynote address on Invisalign Teen at Align Technology’s Invisalign Summit in Las Vegas, NV, where he was presented with Align Technology’s first annual award for his services to the orthodontic and dental community.

Due to his unique background and education, Dr. Brigham

Case 2: This 10½-year-old patient presented with a Class II skeletal malocclusion characterized by 50% overbite, 3-mm overjet and a steep interincisal angle (142°). A Phase I treatment plan of 20 months duration was designed to reduce the anteroposterior discrepancy, correct the axial inclination of the maxillary incisors, reduce the overbite and overjet, and create a clinically acceptable interincisal angle. The patient was followed periodically, and the permanent dentition was guided for an additional 16 months through serial guidance eruption, until the permanent dentition was fully erupted. The Class II correction was verified with updated records, including mounted study casts (Panadent). Invisalign treatment was initiated and completed in 16 months.



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 DR: BRIGHAM
 DATE: 2-19-00



NAME: _____
 DOB: _____ YR 13 MO 5
 DR: BRIGHAM
 DATE: 2-3-03



Date: 12/04/2004
 DR. Brigham





NAME: _____
 DOB: _____ YR MO D
 DR: BRIGHAM
 DATE: 2-9-03



Date: 02/07/2004
 DR. Brigham



DATE: 10/27/2007
 Dr. Brigham



DATE: 03/05/2009
 Dr. Brigham

PHOTOS BY LAURA LANEY OF ARIZONA RADIOGRAPHIC SERVICES

Case 3: This 14-year-old patient presented for orthodontic treatment seeking Invisalign treatment only. Clinical evaluation demonstrated over retention of the mandibular left primary second molar, the maxillary left primary second molar, both maxillary primary canines and the maxillary primary right lateral incisor. The permanent left maxillary lateral incisor was peg shaped. The permanent right lateral incisor was congenitally missing. The patient acquiesced to wearing a maxillary removable Hawley retainer with finger springs to close the diastema between the maxillary centrals. A fixed lingual retainer was placed to the centrals, and the patient was referred for extraction of all remaining primary teeth. Invisalign treatment was initiated at the age of 15 years and 5 months, upon eruption of all permanent teeth. Seventeen months later, the peg-shaped lateral incisor was restored with composite resin, and Invisalign treatment was continued to prepare the residual space for the congenitally missing incisor to receive an implant and final restoration. The patient appreciated a composite pontic that was placed in each Invisalign aligner for temporary cosmetic replacement of the missing tooth throughout treatment until placement of the implant and final restoration.

specializes in all fields and phases of orthodontic treatment. He has practiced in Scottsdale, AZ since 1985, and is a past and present member of numerous professional organizations and societies.

Dr. Brigham credits his capacity to care for his patients and share his experience with his colleagues to his remarkable staff. "Seventy percent of my staff are existing or former patients who sought employment. The majority of these individuals are seeking careers in dentistry, orthodontics or dental hygiene. They want to be here, as they consider the practice a career steppingstone, and their interest and motivation is reflected in the care that they provide for the patients in this practice." The practice has already generated two dentists and four hygienists. More importantly, when orthodontists from across the country shadow Dr. Brigham to observe his Invisalign practice, they consistently commend the commitment, collaboration and *esprit de corps* of the staff as one of the most impressive aspects of any practice that they have experienced.

The revolution that started in the form of cosmetic dentistry has been paralleled by the improved aesthetics, functionality and convenience of 21st-century orthodontic treatment, which in turn supports the longevity of improved dental outcomes. Orthodontics will continue to contribute to our becoming more than we have ever been through extended healthy lifestyles . . . and isn't that the point?

For further information about Dr. Brigham, please visit his website, www.drbrigham.com. ■

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