Making Biomechanics Great Again®: Utilizing Experience Economics

RestorThotics® represents a new development in the history of foot-typing.

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Podiatrists and other professionals are manning a wounded ship when it comes to biomechanics and orthotics.

Current peer reviewed science argues against the legitimacy of Rootian theory,[1–6] the 40 year old gold standard. Jarvis, Nestor et al published in 2017 that "We believe that the assessment protocol advocated by the Root model is no longer a suitable basis for professional practice. They recommend that "clinicians stop using sub-talar neutral position during clinical assessments."[7]

Unproven paradigms theorizing how the human foot and custom foot orthotics function are not science-and-fact based. They are iconic, have served their place in biomechanics and are in need of replacement. The results of presenting unconfirmed assurances have researchers questioning their value and necessity since 2011.[8]

Simultaneously, changes in insurance coverage, technology, and our lifestyles and economic demands have created a better informed foot-suffering public with a demand for better, more certified and evidenced products, better presentations and better marketing of goals that can actually be fulfilled.

This Foot Centering Training Program adds an experience to the use and purpose of a foot bed.

Experience Economics[24]: The Key to Making Biomechanics Great Again®

"The Birthday Cake" metaphor of economists Pine and Gilmore introduced in 1998[9] created a model in economics known as The Experience Economy.[10] They used the birthday cake as an example (this model can also be applied to other commodities such as custom foot orthotics). Both the birthday cake and STJ Neutral cast foot orthotics continue to deliver their promises as iconic products. Experience economics acculturates these and other products to higher levels delivering more.

When it comes to the economic history of the birthday cake, mothers made birthday cakes from scratch (ingredients). Then mothers began paying Betty Crocker for premixed ingredients (commodities). Later, busy parents ordered cakes from the bakery or grocery store (commodities + services). Today, in the time-starved present, parents outsource the entire event to a business that plans the event as an experience (commodities + service + an experience).

The same pattern holds true for orthotics. They started as well-placed arch pads, strappings and gadgets placed into shoes and onto feet (ingredients). Then the arch support was developed (commod-

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New Concepts and Studies

"New Concepts" is a forum for the presentation of (1) new technologies and products and (2) new studies involving existing products. Readers should be aware that Podiatry Management *does not specifically endorse any of the technologies, concepts, or products being discussed.*

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ity). Next, custom foot orthotics were presented attached to a professional (commodity + service) that addressed specific problems or complaints. However, the foot bed has never been reconstructed to the fourth level by adding an experience to the product and services.

Foot orthotics have languished as a foot bed that promises the world and fails to produce it.

The backing of the current custom foot orthotic by podiatrists dampens the professional status of the dispenser standing behind it.[11]

The Facts

1) Custom Foot Orthotics are marketed as a stand-alone product

2) Custom foot orthotics promise to reduce pain for foot and postural problems and at least short-term and for specific complaints, they do

3) Custom foot orthotics promise to improve muscle function and in some instances, they do

4) Custom foot orthotics promise to reduce moments about the knee that are theoretically helpful; and although they do, there is no peer reviewed evidence that this biomedical engineering reduces or eliminates foot and postural problems

5) Custom foot orthotics promise to align the foot and ankle into the most anatomically efficient position, subtalar joint neutral—and they cannot

6) Custom foot orthotics promise that they can correct specific foot imbalance—and they do not

7) Custom foot orthotics promise to reduce stress and strain to the body, holistically—and they do not

8) Custom foot orthotics promise to redirect and reduce damaging movements that take place in closed chain—and they don't

9) Custom foot orthotics promise they are fabricated from "precise imprints of your feet" taken in the most optimal position, subtalar joint neutral—and they are not

10) Custom foot orthotics start with a complaint (pain, suffering, deformity, injury degeneration) and their goal set is to reduce/eliminate the complaint which they are not proven to be capable of doing as a stand-alone product.[12–13]

11) There have been many negative additions to the peer reviewed literature regarding subtalar joint neutral diagnosed, cast and fabricated foot beds by researchers

12) There have been few positive, peer reviewed additions to the literature by the acknowledged experts in the field of lower extremity biomechanics in the past 20 years by researchers (try to name 5 or 10)

13) The current diagnostic methods, the current marketing paradigms and the current markets for custom foot orthotics are not capable of being experiential.

Functional foot typing expands the current scope of biomechanics towards wellness and away from "Band-aid Cures".

The Foot Centering Theory of Structure and Function: A Biomechanical Paradigm Built for Experience Economics

Some success stories where companies engage customers in a mem-

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orable and personal way are: Netflix, which took the movie rental and made it an exciting experience worth billions. Starbucks and the coffee bean. Expedia and travel. MyPillow.com and bedtime pillows and Zappos and shoes. Now think of Biomechanics and Custom Foot Orthotics and compare.

This brings us to The Foot Centering Theory of Structure and Function: A biomechanical paradigm shift for diagnosing and treating feet built for experience economics.

The Foot Centering Theory was first published in 2007.[15] It makes two major changes to the practice of lower extremity biomechanics.

1) Foot Centering starts with a U.S. Patented foot typing method called Functional Foot Typing that classifies all feet into one of five subgroups that can then be treated and monitored foot type-specific, aggressively.

2) Foot Centering custom casts, fabricates and dispenses Restorative Foot Orthotics (RFO's), a new generation of footbeds that purposefully act as props posturing the feet more optimally (think the props in yoga[24]). RFO's make feet trainable (think ballet) and more capable of repairing, restoring and being better balanced with better movement over time than current custom foot orthotic products and claims as each subject trains utilizing a custom plan of care.

Restorative Foot Orthotics come with an experiential guarantee of prevention, performance enhancement, upgraded quality of life and improved endurance and durability when they are attached to a foot typing certified professional such as a podiatrist. This Foot Centering Training Program adds an experience to the use and purpose of a foot bed. RestorThotics, the trademarked name of these devices, by taking biomechanics to the experiential level will "make biomechanics great again®".

The History of Foot Typing

Dr. Merton Root proved that biomechanically responsible care of the foot and posture must include a foot typing system that subgroups research cohorts and patients' feet in order to customize their research and professional care. Historically arch height, the "wet test" and Dr. Root's varus-valgus foot types cannot classify all feet into clinically relevant and evidence-based subgroups. They have not generated viable research cohorts for study. They have not provided a custom platform for developing and implementing custom treatment plans and they are a weak starting point for a biomechanical paradigm claiming to be experiential.

In 1996, Paul Scherer DPM presented a foot typing system as a chapter in Valmassey's Text.[16]

In 2006, Roberta Nole PT, C.ped patented a foot typing system with relevance and an ability to subgroup all feet leading to over-the-counter foot beds.[17]

In 2007, Dennis Shavelson DPM patented a foot typing system which subgrouped all feet and led to custom foot orthotics that were foot type-specific and capable of being further customized, n = 1.[18]

Functional Foot Typing[17,21-22]: Experience Economics Foot Typing

The benefits of using functional foot typing (FFT) as the starting platform for biomedically engineering the lower extremity is that this foot typing method independently exposes the primary locations of both rearfoot and forefoot underpinning biomechanical pathology before, during or after complaints, allowing biomechanists, researchers and practitioners to address the foundational biomechanical components of their problems, restoratively.[19] FFTing expands the current scope of biomechanics towards wellness and away from "Band-aid Cures". It provides the missing link to experiential presentations of biomechanics.

Once foot-typed, using the 3-D Vault of The Foot, The Centroid of The Vault of The Foot, The Rearfoot and Forefoot SERM-PERM Intervals and the primary protocols that are in place to correct overvaulted and

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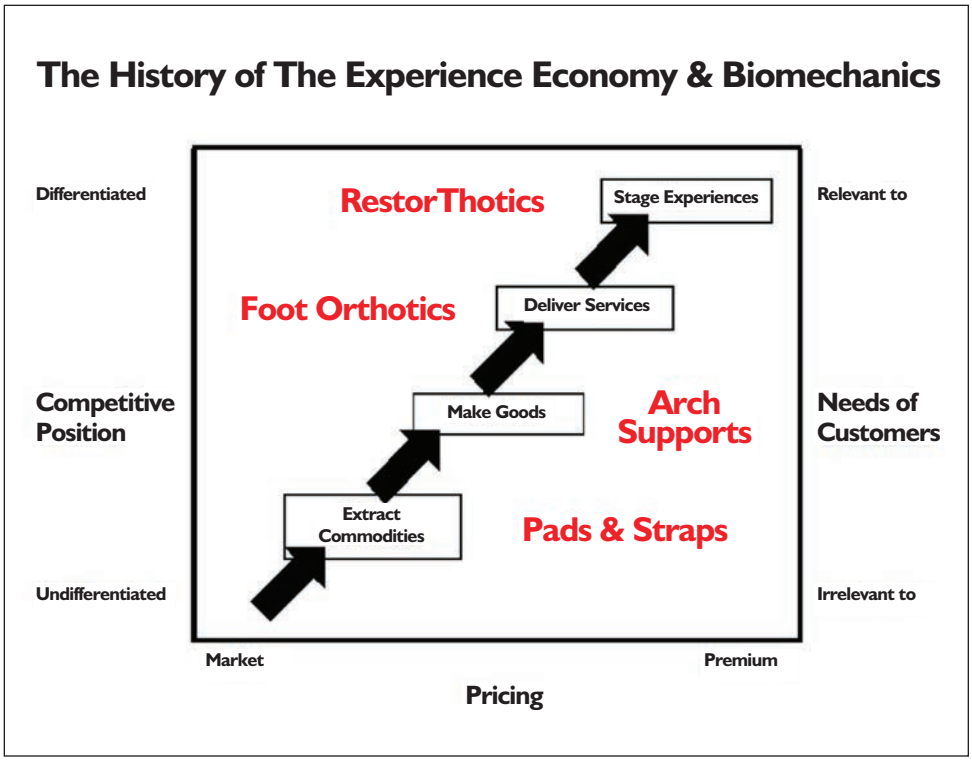

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undervaulted feet, DPM's can offer their patients a logical progression that makes biomechanics an experiential event and not just $30 of plastic placed inside a shoe.

Think of the experience economics of foot binding in ancient China where intentionally, props were applied that that left feet deformed and non-functional,[20] and then envision the experience economics of offering the foot-suffering public restorative prevention, performance enhancement, and quality-of-life upgrading, efficiently and with reduced injury.[21]

One may agree or disagree with the tenets, terminology and practice of Foot Centering but one thing is clear. The shortfall of high-level additions to the literature in the last decades has proven orthodox biomechanics to be in need of a new birthday cake for biomechanics—enter RestorThotics®.

Summarily, unless podiatry wants their orthotics to be permanently commoditized or further proven unworthy, upgrading their CFO's to the next stage of economic value by making them experiential can be an important consideration.

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The RestorThotic Experience

The RestorThotic experience lives in the context of wellness, holistic care, performance enhancement, prevention, quality-of-life upgrading, restorative care and skilled maintenance. RestorThotics® are more like training wheels or the props in yoga[19] than the stand-alone CFO's of previous generations. They promise to pose feet towards a more optimal functional position, allowing Wolff's and Davis's Laws to restore better posture and more injury-free function, more efficiently. These foot beds are props that, in the hands of dedicated and skilled professionals, restore feet and postures towards health and longevity by offsetting the degenerative and deforming forces of gravity, hard ground and shoes in a civilized society. This allows clients and patients to be trained, monitored and maintained pragmatically and in many cases, allows the weaning away of the props such as one does with the props in yoga.

RestorThotics were U.S. Patented in 2017 and can be imitated but not duplicated. They have been alpha and beta tested now for ten years successfully by DPM's.

RestorThotics are a collaboration between a podiatrist turned biomedical engineer of the lower extremity and an acknowledged foot orthotic fabrication expert. Over the past 20+ years, together, they re-invented and perfected diagnostic tests, casting techniques and covert fabrication, presentation and marketing programs that generate foot orthotics guaranteed to deliver prevention, performance enhancement and quality of life upgrading experientially for the first time.

RestorThotics are useful in most podiatry practices especially when there is no orthotic coverage in-network or for your out-of-network-covered patients.

- Dispensed at $600–$1000
- 10 Years of Clinical Trials
- Better Materials and Workmanship

RestorThotics are a collaboration between a podiatrist turned biomedical engineer of the lower extremity and an acknowledged foot orthotic fabrication expert.

- Patented Restorative Foot type-specific Forefoot Corrections

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RestorThotics

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