# HIDDEN IN PLAIN SIGHT

## LIST OF DRAFT FIGURES AND VIDEOS

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However, I fully respect the most expansive view of the rights of such copyright owners and therefore will remove any such materials from this online article on the above website if my very limited use is objected to by such owners who formally notify me at the website.

**Initial Figure** View of bottom sole from an Adidas Feet You Wear concept advertisement/ promotional material.

**Figure 1A** Identical bare footprints of always barefoot European and Solomon Island native from **James**, Clifford S. (1939). Footprints and feet of natives of the Solomon Islands. In the *Lancet*: 2: 1390-1393.

**Figure 1B** Different bare footprints of shoe-wearing European and barefoot Solomon Island native from **James**, Clifford S. (1939) above.

**Figure 1C** From Lawrence H. Wells (1931). The Foot of the South African Native. In the *American Journal of Physical Anthropology*, Vol. XV, No. 2. 186-289, Figure 6 on page 225.

**Figure 2A&B** Figure 2B is Elevated shoe heel elevating the wearer's foot heel and thereby plantarflexing the ankle joint, based on Figure 290 of the classic 1918 Edition of Henry *Gray's Anatomy of the Human Body*, available online at www.Bartleby.com/107/. Fig. 2A is from unknown web source.

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**Figure 4A&B** Based on Figure 290 of the 1918 Edition of *Gray's Anatomy* and adapted from Hicks, J.H. (1961) The three weight-bearing mechanisms of the foot. In: Evans, F.G., ed. *Biomechanical Studies of the Musculo-Skeletal System.* Springfield, IL: Charles C. Thomas. From Kelikian, Armen (2011). *Sarafian's Anatomy of the Foot and Ankle*, page 620. Philadelphia: Wolters Kluwer.

**Figure 5A** Based on Figures 16 and 20, pages 61 and 67, from Sgarlatto, T. E. (Ed.) (1971). *A Compendium of Podiatric Biomechanics.* San Francisco: California College of Podiatric Medicine. Also based on Figure 10 Kevin Kirby et al. (1988). Anterior Axial Projection of the Foot. In the *Journal of the American Podiatric Medical Association* 78: No. 4: 159-170; and Root et al. *Normal and Abnormal Function of the Foot (1977)*. Clinical Biomechanics Corporation: Los Angles.

**Figure 5B** Figures 1 and 2 of Gustav Rubin (1971). Tibial Rotation. *Bulletin of Prosthetic Research*. Spring, 1971.

**Figure 6A&B** Comparison between barefoot and heeled shoe of the path of the ankle joint (talar trochlear) when rotated externally to the outside by shoe heel-induced supination of the subtalar joint, based on Figures 244 and 258 of the 1918 Edition of *Gray's Anatomy.*

**Figure 7** Figure 3.2 based on Plate 18 Man Running, Frame 10 side view, from Muybridge, Eadweard (1887). *The Human Figure in Motion*. New York: Dover Publications, Inc. (1955).

**Figure 8A** Perspective view of body weight forces during running on the lower leg tilted to the outside, based on a part of a figure from *De dissectione partium corporis humani libri tres* by Charles Estienne. Paris, 1545.

**Figure 8B** Simple graph of the force vectors of Fig. 8A.

**Figure 8A1** Based on Figure 8.5 of *The Running Shoe Book* by Peter Cavanagh (1980). Mountain View, CA: Anderson World, Inc.

**Figure 8A2** Annotated Figure 1 of Katrina Mira **Fischer**, Steffen Willwacher, Anton Arndt, Peter Wolf and Gert-Peter Brueggemann (2017). Calcaneal adduction in slow running: three case studies using intracortical pins. ***Footwear Science***, Vol. 9, no. 2, 87-93.

**Figure 8C** Knee Moment Frontal Plane & Transverse Plane Graphs from Figure 4 of Steffen **Willwacher** et al. (2016). The free moment in running and its relation to joint loading and injury risk. In *Footwear Science* Vol. 8, No. 1, 1-11. Winner of the Nike Award for Athletic Footwear Research presented at the XII$^{th}$ Footwear Biomechanics Symposium in Liverpool, UK 2015.

**Figure 8D** Figure 9, page 1850, from Stefanyshyn, Darren J. et al. (2006). Knee Angular Impulse as a Predictor of Patellofemoral Pain in Runners. In *The American Journal of Sports Medicine* 34: 11: 1844-1851.

**Figure 8E** Figure 2, page 481, from Mundermann, Dyrby, Chris O., and Andriacchi, Thomas P. (2008). A comparison of measuring mechanical axis alignment using three-dimensional position

capture with skin markers and radiographic measurements in patients with bilateral medial compartment knee osteoarthritis. In *The Knee*. 15:480-485.

**Figure 8F** Selected graphs from Figure 6, page 8, of Steffen **Willwacher**, Irena Goetze, Katina Mira Fischer and Gert-Peter Bruggemann (2016). The free moment in running and its relation to joint loading and injury risk. In ***Footwear Science*** Vol. 8, No. 1, pages 1-11. Winner of the Nike Award for Athletic Footwear Research presented at the XII$^{th}$ Footwear Biomechanics Symposium in Liverpool, UK 2015.

**Figure 8G** Annotated Figures 3 & 4 of Katrina Mira **Fischer**, Steffen Willwacher, Anton Arndt, Peter Wolf and Gert-Peter Brueggemann (2017). Calcaneal adduction in slow running: three case studies using intracortical pins. ***Footwear Science***, Vol. 9, no. 2, 87-93.

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**Figure 9C** Top views of tibial plateaus (middle photos) from India from Figure 2, page 139, from Kate, B. R. & Robert, S. L. (1965). Some observations on the upper end of the tibia in squatters. In the *Journal of Anatomy*, Lond. 99: 1: 137-141.

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**Figure 10E** Frontal plane cross sections of the ankle bone (talus) showing trabecular under-development of lateral side, from Figure 34 of R. B. Seymour Sewell (1906). A Study of the Astragalus. In the *Journal of Anatomy and Physiology* 42:152-161, particularly Fig. 34 on page 160.

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**Figure 34** Modified Leonardo De Vinci sketch known as "The Vitruvian Man" (c. 1485), showing the abnormal, unnatural general cross-over structural position of modern legs and hip joints, as well as showing the effect of the unstable pelvis, which results in a bent-out spine and tilted-in head.

**Figure 35** Unmodified Leonardo De Vinci sketch known as "The Vitruvian Man" (c. 1485), Accademia, Venice.



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