



Restoring Pan African-Brasiliano connections: more Gondwana control, less Trans-Atlantic corruption.

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The concept of South America and Africa as rigid continents during the formation, growth and motion of their respective plates has frustrated reconstruction of a tight, geologically economic fit between these two fragments in their Gondwana framework. Recognition that internal strains released during and following Gondwana break-up have distorted their original shapes, and that these two continents comprise mosaics of smaller microblocks, or platelets, of relatively undistorted Precambrian terrains that experience modest episodic relative motions along rift zones that separate them, requires a fresh approach to quantitative reconstructions of palaeo-continents. Former geologic ties forged at the time of Gondwana amalgamation are now exposed at the continental margins of the South Atlantic. These piercing points provide robust anchors for new graphical and numerical experiments. We present a new tectonic map of Brasiliano and Pan African structures of West Gondwana on which we identify ten such piercing points which, if re-joined simultaneously, could facilitate quantification of a more transparent Gondwana fit and help retrace the evolution of its continental margins with greater accuracy than can be achieved at present. This has significant bearing on understanding of the origin and evolution of passive continental margins.