A B S T R A C T

1) In continental interiors most structural elements such as rifts, arches, downwarps, uplifts, collapse-troughs and even folds and fold-groups are due to or involve some form or wrenching.

2) The thickness and rigidity of the crust renders purely compressive deformations with crustal shortening rare. Small-scale compression, extension and shearing can create sizeable positive and negative anomalies and extensive fracture-systems. Long strike-slip faults can be generated by moderate shear-motion and maintained by successive reactivations with possible reversals in direction of relative movement.

3) "Paired uplifts and basins" are simultaneously created through the internal reorganisation of shear-zones. Without necessarily external compression or extension. Intense tear-faulting and friction along fault-planes induces rotation, tilting, uplifting and second-order compression and extension. Reversal of shear-motion will alter the type and sign of these anomalies.

4) Deformation within the continental interiors will mostly take place along pre-existing suture-belts and zones of weakness ; the role of the structural heritage is therefore of prime importance. Mega-shear belts may cross continents without loss of their offset. They can trigger secondary anomalies of various types and sizes all along their path.

5) The first-order fault-systems - geofractures - penetrate the continental crust in its full thickness. They form transcontinental structural webs, which may be rejuvenated by the successive stress-regimes and pick up most of the intracontinental deformation. In the meantime, the rounded "nuclei" they separate will undergo relative adjustments through shearing or rotation.

6) Folds and fold-systems in cratonic interiors (and along passive margins) reflect in most cases draping or dragging along and above deep shear-faults. These are either en-echelon parallel fold-swarms oblique to the master-faults (drag-folds), or they are single anomalies parallel to the strike of the main shearing and due to the upthrusting, vaulting or tilting of elongate slabs within the underlying wrench-corridor (drape-folds). None of these necessitates shortening perpendicular to the fold-axes. Such fold-groups can form "passive" orogenic belts of great extent or relief, far away from active orogens.

7) Continents are pulled, rather than pushed, during their drifting ; truly compressive belts are limited to narrow strips along their leading edges. Continental interiors will undergo diffuse stretching facilitated by the deep fracture-network and resulting in steadily subsiding depocenters. "Passive tectonism" may in the meantime affect the passive margins with greater degree of freedom.

8) Strike-slip deformation may occur at any period of time during the global tectonic cycle (from rifting and break-up through drifting and collision), although they are frequently synchronous with orogenies. They may reach any part of the continental interiors, since wrench-generated weakness-belts can convey deformation from coast to coast, from the active margins to the passive margins.

9) The direct assessment of the motion along a shear-belt is frequently most difficult. The specific geometry of shear-belts allows the comprehension of the stress-field and the determination of the direction and, sometimes, the amplitude of the displacement, which may be essential in exploration.

10) Shear-zones form preferential habitats for hydrocarbon accumulation since :

- Great amounts of sediments may cumulate in shear-related collapse-basins, rifts and aulacogens ;
- The specific paleogeographical settings are favourable for confined basins ;
- Multiple stratigraphic and structural traps are generated in the areas of tectonic instability during the recurring phases of movements, even in otherwise undisturbed domains ;
- Extensional fractures create vertical paths for migration allowing hydrocarbons to reach shallow habitats, or to escape from them ;
- Deep fracturing induced by wrenching may improve reservoir-qualities as well as increase heat-flow and allow early maturation.

The key-factor for commercial hydrocarbon accumulation remains the presence of effective cap-rocks, to prevent dispersion along the ubiquitous open-fractures.

Due to the different mechanisms involved, the exploratory approach of sheared zones is different of that of truly compressed belts.