Chalopede



A Little History

- Very early wheeled vehicles
- Sumerian artefacts
- Chariots
- Load Bearing Vehicles

Roads

- The Roman Empire built the Appian Way, and is credited with building hardened roads from stone
- This was done in order to make them capable of carrying heavy war machines, that moved on wheels.
- Many centuries later, as horse drawn carriages developed into motor vehicles, such roads became necessities.

Economics

- Who pays for roads?
- Who uses roads?
- Low cost regions, less roads, lower vehicular access.
- Denial of essential services in regions with less roads, or none.

Roman Roads



Simple Geometry

- The locus of two perpendicular lines moving together produces a circle
- A circle is the essential movement of a wheel
- Two perpendicular rods moving together produces the same motion as a wheel.
- Any kind of linear motor in pairs can be joined to move like a wheel.

Theo Jansen Strandbeest

- Simple linkages powered by pneumatic or hydraulic pressure
- Large assemblies moving in mimicry of living creatures

Choices of Linear Motors

- Mechanical Linkages
- Linear Electric Motors
- Hydraulic Pistons
- Pneumatic Pistons
- Helical Springs

Chalopede innovation

- Local design and assembly
- Serving local needs and communities
- Local sales and service
- Learning by doing, holistic skillset development
- Focus on Local Economy

A few online links

- https://metastudio.org/t/creating-a-pedal-vehicle/2190 This is one of a pair of extended discussions over years, interlinked, that investigated the design and material choices considered for the construction of multiple kinds of powered and foot/hand run walking machines

A few online links

- https://metastudio.org/t/multi-pedal-vehicles/2128
  This is another extended thread where choices of materials and motive power alternatives were discussed

A few online links

- https://azadmaidan.in/t/civilisation-its-history-and-underlying-dependencies-on-inadequately-wrangled-technologies-a-way-forward/116 This link discusses the selection of wheels to aid mechanical devices needed to move people and loads

Thank You!

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