1. Bike adapted for hand-assisted power

<https://road.cc/content/news/87308-dutch-inventor-announces-dual-drive-bike-powered-hand-crank-pedals>

1. 100W pedal power with legs; 30 with hands for 1 hour sustained for the typical person

<http://contemporary-energy.net/Articles/v03n02a03-Gordana-Medin.pdf>

1. Orc off-road wheelchair

<https://chairinstitute.com/orc-off-road-wheelchair/>

1. Hand-rim propulsion vs hand pedal propulsion

<https://www.rug.nl/staff/l.h.v.van.der.woude/120420ursinathesis.pdf>

* Factors that affect efficiency: sitting position, trunk inclination, crank position, moment arm, gear ratio, propulsion mechanism, propulsion characteristics
* Hand pedals more efficient and less straining over long distance
* For recreational use, a slightly reclined or upright position preferred
* Handbike mainly used for long distances

1. Rider Guilt

<https://www.researchgate.net/profile/Donna_Goodwin/publication/260037000_Hiking_excursions_for_persons_with_disabilities_Experiences_of_interdependence/links/0a85e52f29d4dd449a000000.pdf>

“For Nathan, someone who describes himself as an independent person, he found it difficult to ask the sherpas to take him on the extreme trails he enjoyed. He recalled: ‘...In some ways you almost feel bad that you’re asking people to pull you around…’.”

“The riders expressed concern about the sherpas’ welfare.”

Sara: “ I kind of felt sorry for the sherpas because they sometimes had to do a lot of work and get dirty and stuff.”

Keri: “...Sometimes I feel bad for the sherpas, I mean you have to drag, pull and get their shoes all wet...”

“The riders’ physical well being was largely in the hands of the sherpas…”