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Passive dynamics is a good basis for robot design and control, not!

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Many airplanes can, or nearly can, glide stably without control. So, it seems natural that the first successful powered flight followed from mastery of gliding. Many bicycles can, or nearly can, balance themselves when in motion. Bicycle design seems to have evolved to gain this feature. Also, we can make toys and 'robots' that, like a stable glider or coasting bicycle, stably walk without motors or control in a remarkably human-like way. Again, it seems to make sense to use 'passive-dynamics' as a core for developing the control of walking robots and to gain understanding of the control of walking people. That's what I used to think. But, so far, this has not led to robust walking robots. What about human evolution? We didn't evolve dynamic bodies and then learn to control them. Rather, people had elaborate control systems way back when we were fish and even worms. However: if control is paramount, why is it that uncontrolled passive-dynamic walkers walk so much like humans? It seems that energy optimal, yet robust, control, perhaps a proxy for evolutionary development, arrives at solutions that have some features in common with passive-dynamics. Rather than thinking of good powered walking as passive walking with a small amount of control added, I now think of good powered walking, human or robotic, as highly controlled, while optimized for, in part, minimal actuator use. Thus, much of the motor effort, always at the ready, is usually titrated out.