

3) Evolutionary-Institutional Understandings, Cont'd.

- (4) in addition, in a *socio-economic environment*: an important “environmental” factor changes continuously with evolution
 - the *composition of the whole population* (if diversity exists)
- → a “*moving fitness surface*”
- example: a quasi-evolutionary *simulations* à la R. Axelrod's computer tournaments
- (5) thus, if:
 - rate of change of physico-socio-economic environment* > *selection rate*,
 - ⇒ *no “improvement” to some given end.*

3) Evolutionary-Institutional Understandings, Cont'd.

- (6) furthermore: in the socio-economy, with *expecting*, (imagining, anticipating, aspiring, planning, etc.) agents → *reinforcing, positive feedback* may come into existence (“*circular cumulative causation*” (G. Myrdal, based on Veblen’s “cumulative causation”))
- **cumulation:** positive mutual externalities (“synergies”, e.g. R. Cooper/A. John 1988), net-effects, etc. may generate different “*attractors*” (→ *path dependence*)
- (7) example models: *coordination game* (S.P. Hargreaves Heap, the *Polya urn*, also: *technology choice* with net-externalities (W.B. Arthur), where the *outcome* even may be the *worse of two alternatives*
- **real-world examples:** QWERTY (W.B. Arthur, P.A. David) (→ “*lock-in*”), MS DOS/Windows, traffic rules, voltage and plugs regimes, rail gauges, etc.