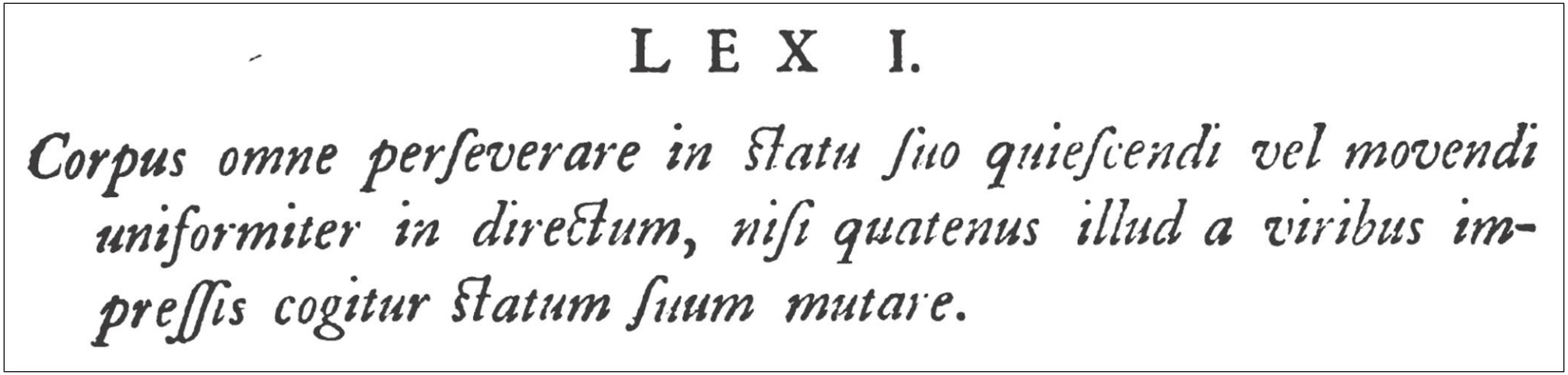
Neither an ejected object nor an emitted ray of light has any clue of its final destination whilst flying.

Sir Isaac Newton,
Philosophiæ Naturalis Principia Mathematica:



LEX I.

Corpus omne perſeverare in ſtatu ſuo quieſcendi vel movendi uniformiter in directum, niſi quatenus illud a viribus impreſſis cogitur ſtatum ſuum mutare.

Each body perseveres in its state of either resting or moving in a uniform direction, except as far as it by a force impressed is intended to change its state.

Whilst travelling,
it can only go
(locally) straight ahead,
as seen from its
own perspective.

It's walking backwards.

It has no eyes in its occiput.

It can do
nothing else
than align each
next step with its
prior footprints,
without knowing
where it is going.

Only ***AFTER*** it hits something, its "*target*" can be known.

Therefore, the

Hamilton/Lagrange

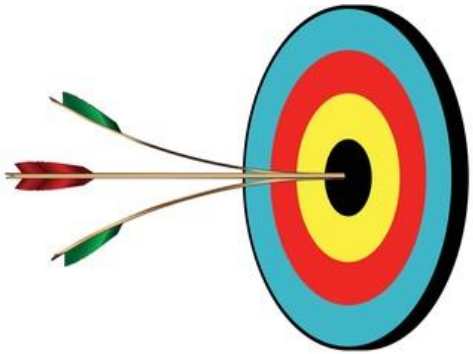
principle of least action,

as well as Fermat's principle

merely find a historical

& *already travelled path*.

Or ***YOU*** 👊 are aiming
the subject at some target
chosen by ***YOU*** 👊 .
But ***YOU*** 👊 can only
initialise its motion.
And ***YOU*** 👊 are not Robin Hood.



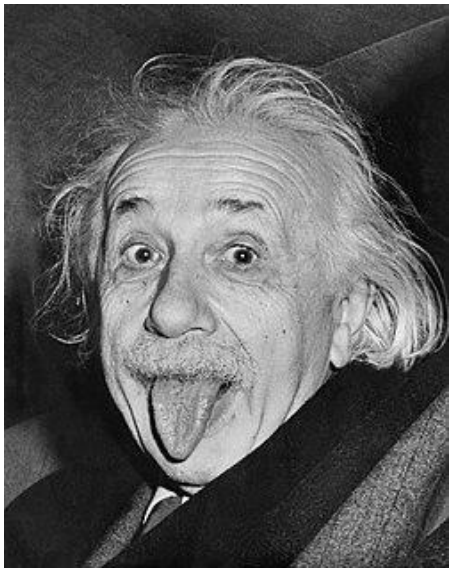
I still miss my ex...

Afterwards, one always knew it on beforehand...

https://www.youtube.com/watch?v=ux9ArSigpoA

Sciebam id! — I knew that!

Did you know you already knew it?



Naaah naah,
nah naah, naaah...

In Lagrangian mechanics,
I've not yet seen it otherwise than
kinetic energy being **postulated**
out of the blue as: $E_{\mathrm{k}} = mv^2/2.$

Hence, it is an **axiom**, isn't it? Then it should **not** be **deducible** from anything!

But can't it *easily* be deduced?

Newton II: $\vec{F} = \dot{\vec{p}}$
together with: $E_{\mathrm{k}} = \int F ds$

Isn't Newton II then put
into the Lagrange equation
on beforehand?

And then, oh what a surprise,
Newton II can be derived from
Lagrangian mechanics.

Please note:

I ***don't*** say Lagrangian mech. is incorrect.

It certainly is very usable and quite often indeed easier than using Newton's laws.

I ***do*** however say it's ***nothing fundamental***.

But Newton's laws ***are*** fundamental axioms.

(that is, except the *law of inertia*,
which can be derived in one single step
as a corollary from Newton II).

Check every possible path on beforehand?

Ever realised
this includes all
infinitely long paths?

Ever realised
this includes all paths
along which it goes
completely astray?

Ever realised there would be infinitely many of such paths, Mr. Feynman?

After checking all of them,

it should keep only

those that will hit the

yet unknown target

and then choose

the fastest thereof.

We *DO observe*

its departure occurs in zero[1] time

when we throw or shine it,

don't we?

Wouldn't a prior check of all

possible paths then *severely*

exceed the *speed of light*?

[1] Or negligible.

But okay, I won't call you a moron, DUNCE!

Henk Reints

Henk-Reints.nl