

CONSTANTS OF MOTION

In mechanics, a constant of motion is a quantity that is conserved throughout the motion, imposing in effect a constraint on the motion... Common examples include energy, linear momentum, angular momentum and the Laplace-Runge-Lenz vector (for inverse-square force laws). In quantum mechanics, an observable quantity Q will be a constant of motion if it commutes with the hamiltonian, H , and it does not itself depend explicitly on time.

Wikipedia

Classical

You've swung
so far as
to risk that
top trill of
your motion.
There, poised,
where beyond
would kill, you're
all potential.
To move. Again,
and when you
do, down, it's
all kinetic, and
what drew you
there compels
you rush on.
Don't stop, please.

Equations

No outer force,
the push/pull
of a father's
dream, career
jig. It's natural.
a caress given
a hug returned
Neither reward,
nor dissipation
figure much
in the meet
equations
of our motion.

Quantum

So the world
plays tough --

torn menisci,
nixed grant.
And then you
saunter by
with simple gifts --
a touch, sweet
love. I am. But
now the test.
Imagine
it turned around:
We fall in love,
all settings "high,"
and then -- in
just a trice
things fall apart,
shoes land, the
world turns on
its random wear
and tear. Where
are we, dear?

Time rate change

Together, still.
But the equations,
heartless, say
stasis is not
an option.
Just move on,
kids, through war
bad knees, oh
a lost child.
To the parts
that cry and
muse, love is
the sole constant
of the motion.