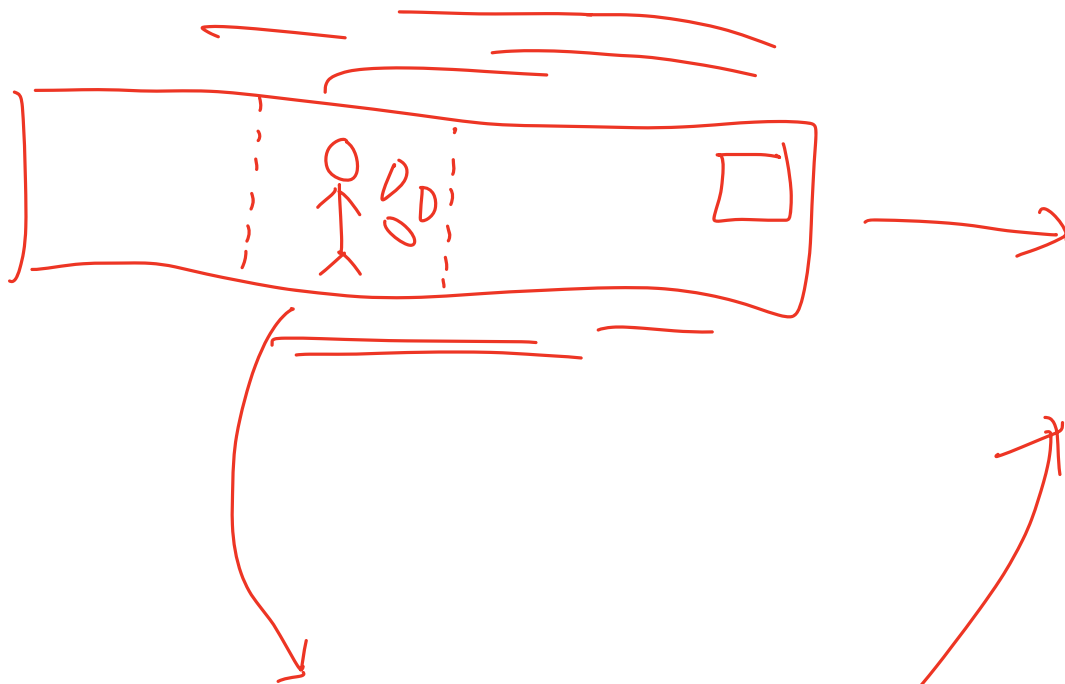
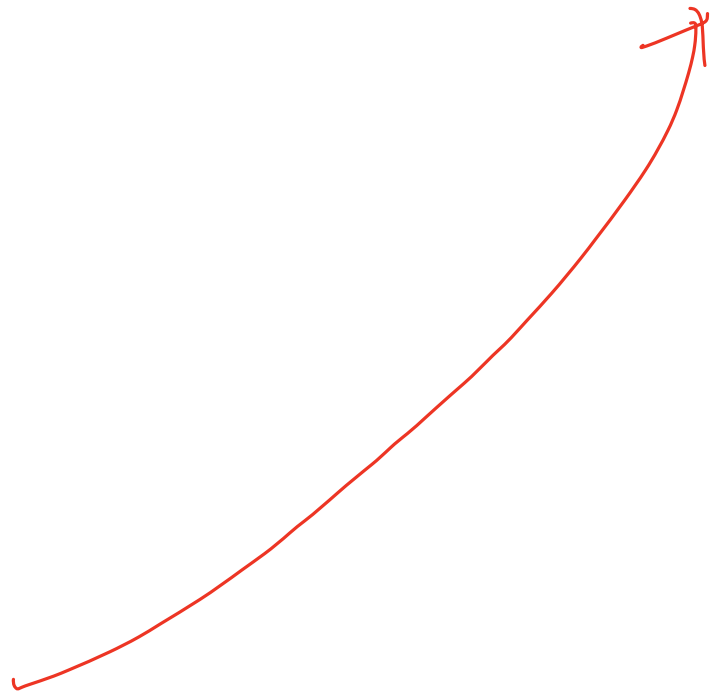
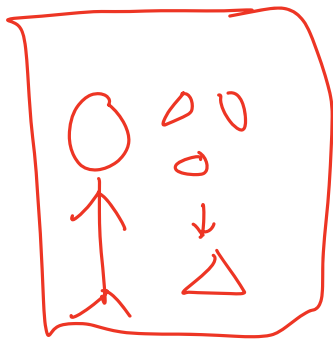


Past

future



Freeze



- ① We are moving to the future, in the present.
- ② Time freezes only for me.
- ③ Every thing else continues to move on to future.
- ④ I am effectively moving back in the Past.

⑤ As a life form who continuously lowers entropy, I would see my body tending to higher entropy while the entropy of the universe lowers.

The arrow of time is reversed.



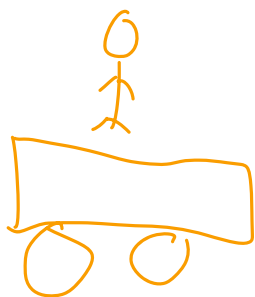
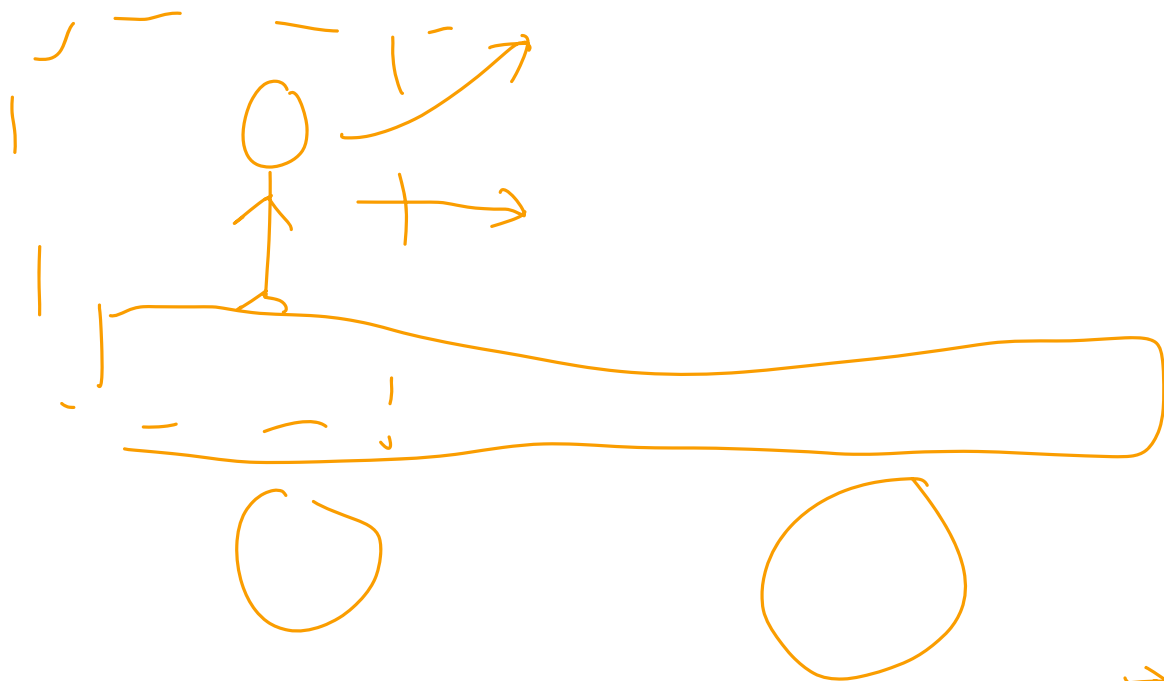
⑥ I do my thing while being in the "past".

Of everybody
else.

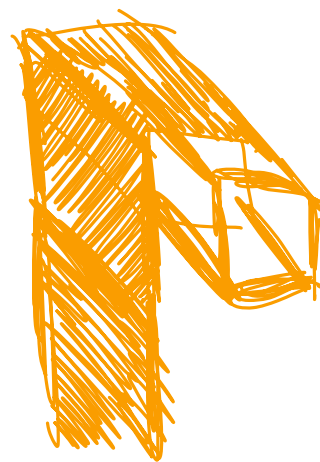
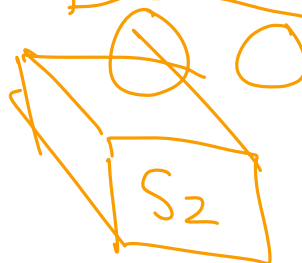
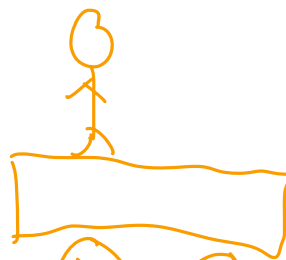
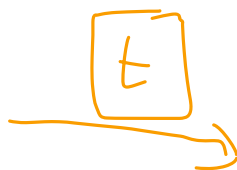
I am left
behind by
the others
moving in the
present to
the future.

⑦ I snap back to the present! from the past.

⑧ I completed my stuff in the past
while remaining in the present!



S_1



$$S_2 > S_1$$

Think of it as a local time freeze while the world moves on. Work on any skill you desire. When lockdown ends, you return to the present with "skills from the past".

- ① We are all in the present, moving to the future.
- ② Time freezes for me ONLY; everyone else continues their journey.
- ③ By social relativity, I am effectively moving to the past.
- ④ I progress in my motion e.g. I construct a triangle while moving towards the past.
- ⑤ I suddenly snap back to the present.

- ⑥ I met nobody outside my F.O.R during MY Journey.
- ⑦ I Constructed the Δ in my Journey.
- ⑧ I did not move with the others ;
I was left behind.
- ⑨ While left behind, I made Δ .
- ⑩ As I switch back to present, I use the Universal Coordinates again.
- ⑪ Knowing that I was left behind in time flux, and using the Universal Coordinates, I made the Δ in the past w.r.t Universal Coordinates.

Fermi Gas / e^- degeneracy Pressure and White dwarves.

↳ Like a metal

A white dwarf being the remnant core of a red giant is made of matter under high temperature and pressure. Matter in the core is in the plasma phase, [free electrons and nuclei].

↳ The electrons in no way interact with the nuclei → Why??

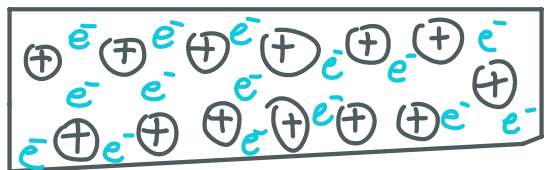
↳ They are not limited to normal matter orbital chemistry. *

The electrons now seem to be free.

The core can be thought to be like a metallic bonding structure [though not very accurate]
↳ Not a solid.

↓
Plasma too hot; ionization of matter makes Nucleon - e^- bonding less likely.

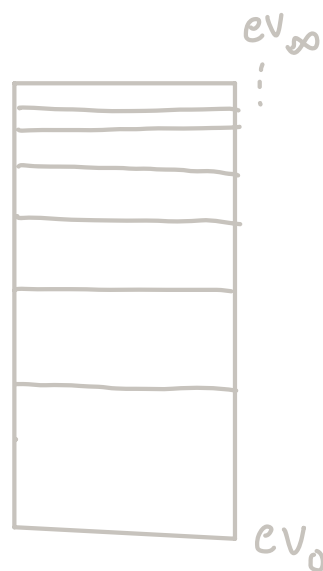
We have a sea of nuclei in a "Sea of free electrons"



This resembles



the e^- band structure description in solids



* Since the core consists of matter closely packed together, the orbitals of the atoms overlap, Since Pauli Exclusion forbids more than 2 e^- occupying 1 orbital, the orbitals merge to form many different Molecular orbitals to accommodate the electrons.

↓
But how can we consider orbitals when the electrons are not bound to the atoms?

↙
In Atomic Theory and Quantum Mechanics, an Atomic orbital is a mathematical function describing the location and wave-like behaviour of an electron in an atom.
in the vicinity of an atom.

In the ion-plasma form, orbital chemistry is not the same. There exist solutions with electrons present in regions different from normal matter.

↘ This create several "Molecular" orbitals each with $2e^-$.

The white dwarf, having been the core of a sun contains matter at high T and pressure.

The matter exists as a plasma of unbound nuclei and electrons.



We have nuclei in a sea of "free electrons".

In a white dwarf, density and temperature is quite high.

↳ e^- leave their atoms and matter exists in the plasma state.

The star can be considered as a sea of free electrons.

[A fermi gas]

In a normal fermi gas

From Pauli exclusion Principle, fermions cannot have the same quantum state.

↳ They occupy discrete energy levels

