

Nuclear Force and Weak Interaction

A general doubt:

These forces, the strong, nuclear one and the so called weak interaction, acting in microcosm, have naturally been more difficult to investigate - and several news have been introduced into the "standard model" the last decades, since the original writings here were born.

Yet, the views of today are partly only theories - about unseen "gluons" among other things - and implies a certain choice of concepts and what to focus on. It must be allowed to doubt that this apparatus of thoughts is the best or final one. More about the standard model later. First some aspects building on informations from the 1960th and 70th.

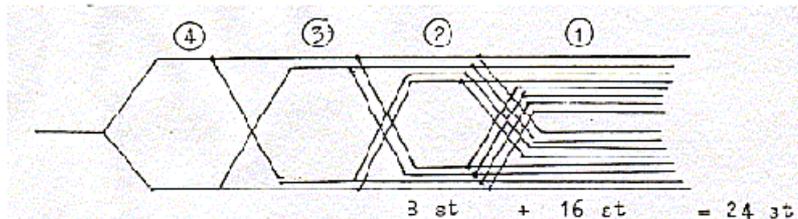
Nuclear force a combination of other forces ?

According to physics about 30 years ago the nuclear force or strong interaction seems to be a combination of "earlier" forces or of components from them - . In the same way as later steps in a dimension chain follows from the earlier ones.

At that time physicists told that the strong force was made up by a lot of potentials, some resembling gravitation, some electromagnetic ones.

In a more detailed description there is talk about 8 times a gravitation like force, 8 complex potentials resembling electromagnetism and 8 simple attractive potentials. (If correctly understood, they should correspond to 8 mesons with spin 2, 8 mesons with spin 1 and 8 mesons with spin 0?)

If 3 x 8 potentials, they could perhaps be illustrated as in the figure below, with the strong force as a complicated result from earlier d-degree steps.



The 2x-series gives number 8 after 3 polarisations, which could correspond to step 5-4-3-2, and number 16 then at d-degree 1: one reason for the absurd simplification (see Forces - MEGA-fields) to assume that the strong force is connected with d-degree step 2-1?

Number 8:

24 units is also the result of $4 \times 3 \times 2 \times 1$. And if we take the assumed "potential values" (sum of poles) in d-degrees 4-3-2, that is 10 E, 8 E, 6 E, and count with a displacement of 2 E in each step, we get 8 E, 8 E, 8 E.

The number 8 shows itself again in the information that the strong force is not fully developed in nuclei until it has 8 or more nucleons.

To all this comes the "octette rule" for **covalent bonds**, which could be identified

as the complementary force. 8 e- give a full shell in the atom (in fact 6 + 2).
(Cp. modern presumed "gluons", 6 + 2?)

Further, if we accept the hypothesis in this model about angle steps in the dimension chain, from 180° polarity (Fg) and 90° (Fem) to 45°, there is 8 x 45° in a circle. Which 45° ? See below.

In terms of Motions:

According to the physicists the strong force can also be analysed in terms of spin-/spin-dependence and spin-path-dependences between the nucleons: that is to say in couplings between motions.

This could perhaps also support the suggestion that the strong force is coupled with a d-degree step 2→1. According to the chapter about motions we have assumed that the lost d-degree in step 5→4 is translated into 1-dimensional motion, path movements, corresponding to step 1-0/00, and rotation (cf. spin) out of the second polarisation step 4→3, corresponding to step 2-1.

According to this model, it should be possible to analyse all forces in terms of motion structures, but this could be easier to detect in lower d-degrees where more potentials have been polarised into motion. In d-degree 2 there should be movements in 3 dimensions, in 1-dimensional structures d-degree movements in 4 dimensions. Which would be the 4th? Inside the proton?

Remember here the coupling between the proton and M^2 and what has been said about the magnetic force or vector, that it totally depends on the spin of the photon.

D-degree step 2 — 1 and "negative distances"?

Two things are obvious, as said in the text about "Forces and MEGA-fields":
Gravitational gathering of big masses, leading to high pressure and high temperature in stars is also needed for fusion and the development of a nuclear force.

And the nuclear force cannot develop before the polarisation of the property Charge into (+) and (-) is a fact, in this respect a later step in relation to the electromagnetic force **Fem**.

The primary physical quality of d-degree 1 is Distance. In one of two central aspects, distances are created by the polarisation between opposite charges of the proton and the electron. That too is rather obvious:

$$\begin{array}{c} 2a-----1-----2b \\ p-----e \end{array}$$

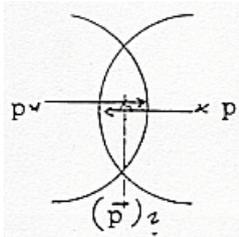
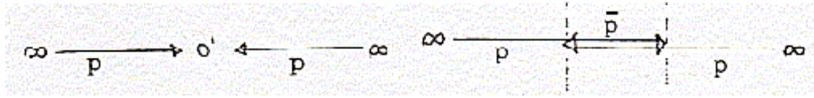
If Mass as property (~ inertia) is a kind of "inversion" of G-fields (cf. "negative acceleration") and Charge as property a result of "inverted" EM-fields - as presumed, and Charge - as inversely proportional to permeability - could be interpreted as a surface structure, and with the physical quality Distance in d-degree 1, how imagine "**negative**" **distances** as a central property of heavier nuclei? It could mean that the nucleons partly were overlapping, existing inside one another ?

With "inversion" interpreted as "going underground", a change to inward direction

and energy in a complementary, negative form? Inward directed surfaces as 2-dimensional magnetic fields as parabolas or hyperbolas squared ?

Proton-/antiproton relations in nuclei?

Some decades ago there were thoughts among physicists that it could exist some p /anti-p-relation inside the nuclei. This information gave rise to the idea that inward directed magnetic fields around the protons could overlap each other and therewith define an area with opposite, outward directed M-field as anti-matter:



The figure above could illustrate a kind of role exchange between convex and concave forms and inside/outside, presumed in this model as the first simple geometrical definitions of 2a and 2b, the poles of a polarised d-degree 2.

In terms of "inverted fields" we could guess that it chiefly concerns the M-component of the EM-field, the magnetic field with assumed roots in Gravitation. (Electrons mostly an expression for the Fa-field and the Electric component.)

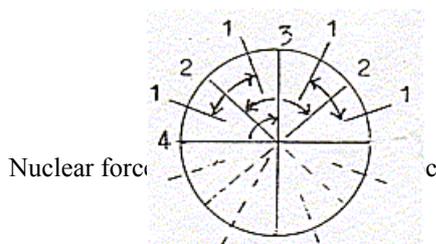
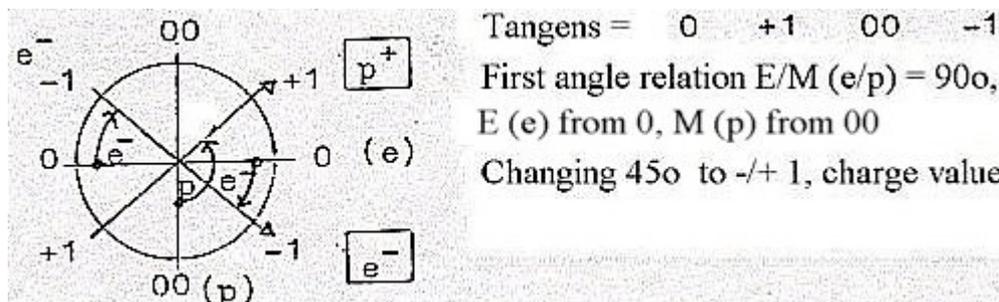
Angle steps?

One presumption in this model is that the d-degree steps in a dimension chain are associated with angle steps, simplest assumed as halvings:

Fg/a	Fe/m	Fst	Fw
180°	90°	45°	22,5°
		???	????

In d-degree 2 we should have a relation 45°.

This could perhaps be illustrated with the value of tangens in a unity circle:



The unity charge value is set to 1, the tan value at 45°, a

background for calculations of quarks' charge values.

Here we can remember some old and as it seems conflicting informations: one that Charge seemed to go towards infinity inwards the electron (?), and one that said that charge is built up from outside inwards towards heavier nuclei, (protons), interpretable as if directed towards zero inwards.

Tangens too is the derivative of a circle, the geometrical form of d-degree pole 3a according to first simple postulates.

We could also imagine perhaps that the E- and M-vectors of the electromagnetic field undergo a change in their angle relation towards lower degrees 2-1-0/00, possibly, if at last nearly parallel, responsible for some anti-gravitational behaviour and happenings in plasma physics? ?

Complementary force to the nuclear one?

With the assumption in this model that the "real" antimatter is of complementary type and not a mirrored world, the real complementary force to the nuclear one ought to be - not bonds between anti-p-particles - but the molecular, covalent bonds between electrons in a much colder universe, leading to the eminent development of all life processes.

Or should we first see the pairing of electrons with opposite spin in the atomic orbitals (connected with the Pauli principle) as the complementary force on an earlier stage? (Why isn't the Pauli principle identified as a "force"?) More generally: the e-shell building "forces" of the atom?

- More wave-like and in that respect outward directed towards complementary atom neighbours.
- 2-dimensional as squared amplitudes in Schrödinger's equations for their probability existence "somewhere".

Reach of the nuclear force - the Uranium atom:

The heaviest element in nature is Uranium 238 A, one measure of the reach of the strong force. Two rather beautiful or funny derivations of the number, remembering that the strong force, as atoms, should be combinations of other forces:

Inverting the triplet-number 2-1-0 out of the dimension chain (times 10E5) we get the number of 2 x 238. From the booklet about Chemical elements.

${}_{92}^{238}\text{U}$: Uranium, heaviest element in Nature

92 Z, 238 A

Dimension chain: 5 — 4 — 3 — 2 — 1 — 0

Mass: 3 — 2 — 1 — 0
Charge: 2 — 1 — 0

"Triplet" numbers

$\underline{543}$	\wedge_4	$\times 1/2, \times 10^5 = 92,08 \approx 92.$	$= (Z) \text{U}$
$\underline{210}$	\wedge_4	$\times 1/2, \times 10^5 = 238,09 \approx 238.$	$= (A) \text{U}$

Nuclear force:

Another derivation, from the "natural logarithm" e:

$$\begin{array}{cccccccc}
 5 & \text{-----} & 4 & \text{-----} & 3 & \text{---|---} & 2 & \text{-----} & 1 & \text{-----} & 0/00 \\
 & & & & & & & & & & \\
 & <-----> & & & & & & & & & <-----> \\
 & 5 - e & & & & & e = 2,71828... & & & & \\
 & 2,2817... & & & & & & & & &
 \end{array}$$

$$\begin{aligned}
 543 / (5-e) &= 237,97 \sim 238. = A \text{ mass number of U} \\
 210 / (5-e) &= 92,036 \sim 92. = Z \text{ charge number of U} \\
 (543-210) / (5-e) &= 145,94. \sim 146. = N \text{ neutron number of U}
 \end{aligned}$$

It's probably left to the future to find out if these "derivations" reveal a deeper meaning.

($2382/3 = \sim 38,4 = 10$ -power of the Gravitation weakness compared to the nuclear force.)

($102,3765 = \sim 238. (237,95.)$ There somewhere is a log-number which in the 10-base system gives 100 times itself.

Reach $\sim 1/r^3$, - a tentative suggestion:

According to earlier informations the strong force falls of proportional to $1/r^3$, which can be read (?) as a derivative from the same term for the electromagnetic force, $1/r^2$, or as a product $1/r^1 \times 1/r^2$ from earlier or more fundamental forces.

Suppose we could read these $1/r^x$ -relations as inversions of the forms of motions in the different d-degrees:

$1/r^1$: 180° : 1-dimensional motion "space" or degree of motion inside a Mass or when a mass is accelerated: a "bond line" of 180° .

$1/r^2$: 90° : 2-dimensional "space" or degree of motion between Masses or opposite Charges: Cf. orbital planes for planets or electrons.

$1/r^3$: 45° : 3-dimensional "space" in "the angle" of the strong force? Cf.. perhaps that $8 \times 45^\circ = 360^\circ$ and that the strong interaction is fully developed first with 8 nucleons. The degree of motion (3) should close its form - perhaps one cause to the stability of protons.

Note too that the "carrier" of the strong force - or the exchanged quantum *between protons*, **the π -meson, has got Mass**, a considerable one, - in opposition to the carriers of the previous forces, the assumed graviton and the photon of the EM-field, both without mass

"Carrier" - the π -meson:

Before the "discovery" of *gluons*, the π -meson was identified as carrier of the strong force. It is still seen as the communication particle between protons as whole entities, gluons as "carriers" between quarks inside the protons. But is there any reason not seeing the interaction by π -mesons between protons as expression for the strong force? Quarks not being free particles? (The assumed gluons as another "force" if we want that. ?)

The annihilation between protons and antiprotons produces during the disintegration - not quarks but π -mesons which disintegrate in μ -leptons, μ -neutrinos, electrons, e-neutrinos and electromagnetic radiation. (*Gamow*)

Compare the relation between poles in d-degree step 3-2 in the dimension chain of this model: 3a <-----2----->3b:

Protons composed of 3 quarks, π -mesons of 2 quarks. Yet, the pole 3b ought to represent the antimatter on this level, according to the model here..

Now the physicists describe the π -mesons as consisting of one matter quark and one antimatter quark, so it partly seems to agree in number with the 3a---2---3b illustration of d-degree 2.

Could we imagine the π -mesons as virtual parts of the communicating protons with quarks "uud" ?

$p = uu|d \text{ ---- } u|ud = p$

$\pi = ud,$

u or d changing charge to the anti-matter quark? Compare the thought of overlapping magnetic fields above with the change convex-concave or inward-outward direction.

(A note for a lover of numbers:

If we assume that the mass quotient (1836,...) between proton and electron, (p/e) in the bottom is an integer, and mirror the number, we get:

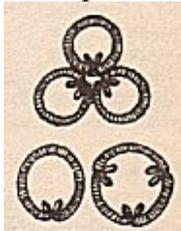
1 8 3 6 | 6 3 8 1

3 6, 6 3

\wedge , the inversion $1/36,36, = 273,000273000273\dots, \times 10^{-4}$

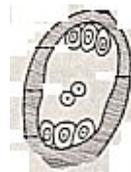
Apart from the ten-power, that number 273, repeated, is the number of the charged π -meson, the quotient π/e .)

A couple of associations:



3 types of ovary

B. Ursing: Svenska växter 1944



3b-----2-----3a ~ antipodes

Embryo sac of a flower

Biologi I, A Müntzing 1970

Number 137:

According to information sources (*Gamow*) the number 137 as a quotient appears in three contexts, presumably connected:

- The quotient between the strength of the strong interaction force and that of the electromagnetic force = 137.

That is about half the π -meson.

- The mass of the (assumed) magnetic monopole. = 137 times that of the electron.

- The quotient between the velocity of light and that of the electron around the atom nucleus (in an orbit model of the atom) is said to be about 137. (The magnetic monopole not found yet.)

Quarks:

These are indications of 3 parts or areas inside the proton, where charge seems concentrated. Some negative charge too. The names up-quarks and down-quarks with positive and negative charge respectively in our ordinary matter, seems to agree with the fundamental view in this model here that Direction (d-degree 4) underlies and characterises all poles of lower degrees in different angles and geometries.

If the quarks cannot be free particles or quanta, as physicists assume, it could depend on the "quarks" simply being the essential inner structure of the proton itself, as walls in a three-room flat. (The possible break down of an inner wall making it a two-room flat. - As mesons? But then the proton should disappear, changing to the meson which it obviously doesn't.)

The believe is that the 3 quarks together have a mass of about 25 MeV. Mass of the proton is 938,3 MeV. Accordingly there must be a lot of other energy. In "bonds" between quarks? * Compare the view here that Matter is a measure of the degree of inner structure or included volumes. (see further about Charge.) Then not necessary in terms of "bonds".

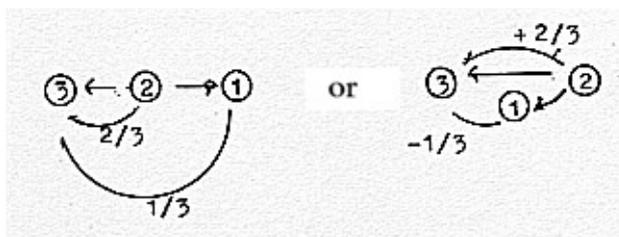
Yet, physicists have introduced the gluons in the standard model: Gluons as quanta of communication between the quarks is supposed to be the real strong force carriers, π -mesons reduced to only a secondary role as exchange quanta between gluon-processes in each proton.

*(Compare that the average binding energy per nucleon in heavier elements is estimated to circa 7-8 MeV. In Uranium 238 A it should give a total bond energy of less than to protons.)

About the nuclear force in d-degree step 2 - 1 again:

1) The charges attributed to quarks, $u = +2/3$, $d = -1/3$:

A very simple illustration or interpretation here, partition as expressions for the polarisations in $3 \rightarrow 2 \rightarrow 1$ -step in the dimension chain:



More, see Charge

2) We have the number 8 for the strong force again in the number of gluons. $6+2?$

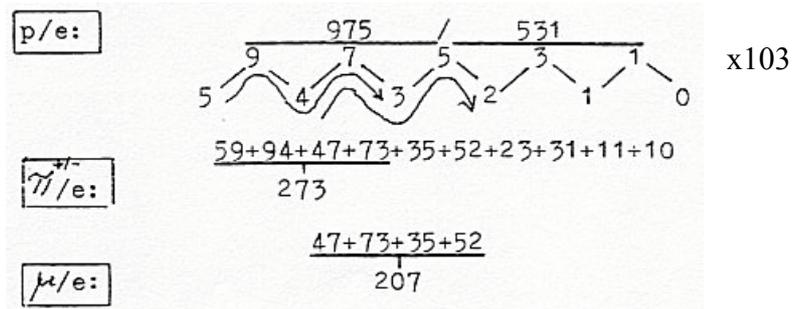
Compare as above: $3b-----2-----3a$

More about the view on forces
in the Standard Model.

About 6-dimensional ($3a+3b?$) Calabi Yau-rooms

in the String Theory.

p/e - π - μ - numbers - and a K -meson:



$K^0 = 975/e$, disintegrates into π -mesons.

π -mesons disintegrate in μ , e and ν (neutrinos).

Numbers, more [here](#).

Spin: the different way for π to get spin Zero: not commented: Gluons are attributed spin 1, a spin of the same kind as the photon.

Fw - Weak Interaction

Some essential changes has occurred in the physicists' aspects of this weak force since the 1970th and the original texts here. Yet the neutrino is still closely involved, earlier seen as carrier of the force. First, from informations at that time:

Weak interaction was chiefly seen as the "force" responsible for disintegrations, such as the disintegrations of p-mesons and the so called m-"mesons" (not being mesons now but leptons).

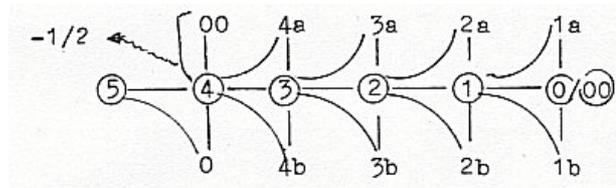
This seems to be one good reason for relating this force to d-degree step 1 - 0/00 in our dimension chain. (Seeing p-mesons of the strong force in previous step for example as a binding force in relation to this weak one, according to first postulated definitions. Or inversely: the weak force as the polarising force of lower degree in relation to next higher degree of structure.

The neutrino is also regarded as nearly pure kinetic energy, another reason to relate this force to the step from 1-dimensional potentials to Motions (d-degree 0/00).

Neutrinos of the weak force was mostly registered as a a loss of energy: a loss of about half the energy, for example, in p-anti-p-annihilations, and a loss of spin $\frac{1}{2}$. Neutrinos are (therefor?) attributed spin $\frac{1}{2}$.

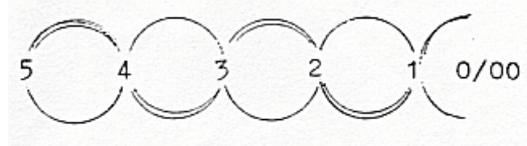
Loss of "1/2"?

According to a hypothesis (in Physics I a) we should sometimes expect the loss of a $\frac{1}{2}$ in the dimension chain , one half of a step or half the chain: Step $5@4$ implies a polarisation of d-degree 5 in the poles 0 and 00. We could then imagine that only the one branch, $5@0$ -pole, through further developments leads to a quantum, a unit with enclosed centre, that is half the chain. The branch $5@00$ will be open,



undefined, equivalent to the "surroundings".

A dimension chain as a repeated cyclic process could perhaps be compared with a standing wave, where half a wavelength is lost at reflexion? (Note: step 1-0/00 branched off from step 5→4.)



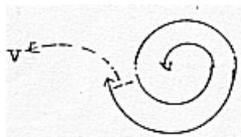
Yet, there is something wrong with this analogy, if spin $\frac{1}{2}$ corresponds to two turns of a quantum, for looking the same again, see Spin.



Inside a sea urchin, ancestor to human beings:

They have a very complete and beautiful 5-numbered shell on the outside but inside a wave-form of only $4 + \frac{1}{2}$. (At least one specimen!)

Another illustration is the spiral: a typical example of the missing $\frac{1}{2}$. Half a turn is always missing, farthest in or farthest out:



5-00 as spiral. v and anti- v -quanta

Here we have a matrix relation the curled line as a potential (from a 0-pole) and the building-in of the surroundings as 00-pole. Compare that there are at least two types of neutrinos, those coupled to the heavier m -leptons, and those coupled with electrons, like the matrix "substance" in different turns **of a spiral**. The weak force connected with a spring constant?

Participation in all d-degrees?

The weak force, if related to d-degree step 1-0/00, ought to show up in all the other steps too, since this step is branched off in all higher d-degree steps. So it does in the disintegration of π -mesons of the strong force and in connection with p-anti-p-annihilations and release of electrons (at $n \rightarrow p+e+n$), charges out of EM-fields.

What about gravitation-acceleration fields, the "GA"-force? The character of a disintegration force could reveal its connection with the F_A -force, the outward acceleration, coupled to Vacant Space, as anti-matter partly built into microcosm. Perhaps the weak force in one aspect is connected with the presumed 1-

dimensional motion in these 4-dimensional vector fields. According to first postulates in the model here 1-dimensional potentials (d-degree 1) should have motion moments in 4 d-degrees, e.g. illustrated as growing-decreasing spirals, motion forms defining a 4-dimensional "space".

Connected with which physical quantity?

With Mass connected (and some kind of "inversions" of) G(A)-fields and Charge as property connected with EM-fields, aggregated positive charges in nucleons of higher elements connected with the strong force as a superposition of factors of the previous fields and perhaps "negative distances" - which elementary physical quality or quantity should with the same views be coupled with the weak force?

It should be Motions as such, "to and from each other", in d-degree 0/00 according to the suggested interpretation here, (motion as the derivative of 1-dimensional distances, and motion as the transformation between Distance and Time. The d-degree step $1 \rightarrow 0/00$ means a loss of an element in structure. The other way around, in first step $5 \rightarrow 4$, the "physical quantity" suggested is the concept of Density, a measure of the distance to a centre. A connection with Density could be one aspect on neutrinos or the anti-neutrinos. Cf. perhaps the extremely heavy W-Z-particles, see below.)

(In a chapter about physical quantities (Physics I b), are tested some transformations of these to the quantities meters and seconds, from the suggestion that Mass could be written as "negative" or inward acceleration and Charge as "negative" velocity. Density gets the form: $[-1/m^2s^2]$, that is the negative square of inverted Distance x Time, the only quantity that becomes a product of these units, not quotients.)

Parity:

Weak interaction was also said to differ from F_{em} and F_{st} (and F_G ?) in the fact that parity is not preserved, which implies that there isn't symmetry between "right" and "left". This could be understood as expression for a new polarisation, added to the other, (like outward / inward, forward / backward / up / down). Another reason for identifying this force with the latest step.

Angle steps?

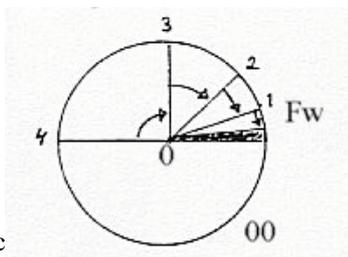
Are there any expressions in the strong force and the weak interaction for the assumed angle steps in lower degrees, $22,5^\circ$ in d-degree 2 and $11,25^\circ$ in d-degree 1?

- $\tan 22,5^\circ$ (the strong force in step 2-1) = $\sqrt{2} - 1$.

(or $67,5^\circ \sqrt{2} + 1$)*

- $\tan 11,25^\circ \sim 1/5, 0,2. (0,199.)$

* (Cf. convergent series - ? - and the quotient denominator in the serial development of $\sqrt{2}$. Repeated processes in nuclei and nucleons?)



Hardly interacts with Matter?

It has been said too about neutrinos that they hardly at all interact with matter. In some way that sounds absurd.

Feynman is said to have viewed photons as sewing matter together, and shouldn't that be valid for the neutrinos as well in at least the same degree!?

Hypothetically, one aspect on neutrinos could be that they are responsible for the bond between the poles 0 and 00 in a very primary sense. Like electrons and protons, which can be seen as secondary 0- and 00-poles, where Fem is acting. Neutrinos could then be seen as an expression too for the connection between the poles positive and negative Mass (Mass - Vacant space). (Neutrinos - anti-neutrinos in different directions, outwards / inwards).

The "standard model", new interpretations:

There are at least three odd things in the new interpretation of the weak force:

- 1) The interaction occurs between quanta of family 1 and 2: μ -leptons and μ -neutrinos, belonging to family 2, are introduced on one side.
- 2) The interchanged particles are the new W-bosons (found or produced?), which fulfills the condition of spin 1 but
 - a) are charged (+/-), in opposition to the carriers of the other forces in the new scheme,
 - b) are three with the zero-charged Z-boson,
 - c) are immensely heavy, about 10^5 times the mass of the proton, while the carriers of the other forces are assumed or known to be massless.
- 3) Perhaps the oddest thing is the new thought that exchange of these bosons occur while electrons are transformed to electron-neutrinos and on the other side μ -neutrinos instead transform to μ -leptons.

This is very hard to swallow for us who have heard about these quanta and thought that at least electrons had a rather stable existence in our energy use and atomic world.

The belief in transformations to/from neutrinos to / from electrons and μ -mesons could be sign of a difficulty to distinguish between d-degrees and d-degree steps, as between borders and intervals, a structure and its matrix (cf. a spiral), or between a d-degree structure of potentials and the pattern of motions (kinetic energy)?

The pole exchange in d-degree 0/00 in the dimension model here, where "motions from each other" (outwards) define a 00-pole, "motions to each other" (inwards) define a 0-pole, could perhaps imply a new start and be coupled with the transition to family 2 quanta in some way?

0 and 00 as outer poles of d-degree 4, the vector fields, and the coupling between step 1-0/00 and step 5-4, could perhaps also lie behind the heaviness of the new bosons?

More about the odd views on forces in the Standard model - some comments.

Three general aspects on the concept of forces:

1) Forces as outer correspondence:

:The view in the standard model makes forces look like correspondence between quanta, while these "transform" to them selves (!) or to other quanta. This correspondence is illustrated like some kind of wave bonds, but seems more like expressions for these bonds, as "the outer connection", not for the underlying real binding force.

2) Forces as translated to motions:

The new word for the concept of forces is "interaction", and it resembles to some extent what in this dimension model has been defined as the d-degree of Motion: motions "to and from each other". Polarised and quantified potentials (of one or more d-degrees?).

The old question from classical physics about which forces cause these motions is dismissed. A question which in this dimension model is equivalent to the question how the Forces can be derived from each other.

3) The complementarity principle dismissed:

At least the well-known, "polar" electromagnetic force was earlier seen as a bond between complementary units, charges of plus and minus.

This complementarity principle between corresponding quanta in these interactions seems now totally dismissed.

The photon, quantum of the force F_{em} , is now described as an exchanged quantum between solely electrons, quite difficult to understand. So is the assumed graviton of the gravitation field, F_G : illustrated as an exchange particle between electrons only! Still more curious, if possible!

One could ask: Has Feynman's way of illustrating interactions seduced the physicists? And their frenetic fixation at the least possible "material" particle? Even if outsiders have to accept that physicists' view, with today's information, is one way to look at facts, we must be allowed to believe there are better ways.

About comparison with the dimension model here:

1) Use of anti-matter:

With the electromagnetic force or interaction as example, and the π -meson of the strong force (keeping to the view that this is the real "carrier" between protons), we can predicate that "carriers" is using the anti-matter on their level for their existence and propagation. Photons using the magnetic field, the counterpole to the electric one, and π -mesons using one quark from the anti-matter region. Similar as said above to human beings using surrounding air for the speech. (Cf. "Electromagnetic Waves".) We should be able to assume that the same is valid for the other forces, as "ga"-carriers for "gravitation" and those of a weak force, for a homogeneous definition of forces.

If so, there is in this respect a similarity with first postulates here about higher d-degrees (defined as potentials between complementary poles) as binding forces

in relation to lower d-degrees.

2) Motions as polarising force:

In the dimension model here lower d-degrees and ultimately d-degree 0/00 of Motion are postulated to be the polarising forces in relation to higher d-degrees.

Perhaps we could read the illustration of forces in the standard model in another way:

It's the motion of electrons (described as transformed to themselves!) that polarises the EM-field, activating the M-field as complementarity pole.

It's the motions too of electrons (!) that polarises a G-A-field, / activating also Gravitation, since electrons are coupled to F_A , the complementary pole, according to interpretations of "MEGA"-fields in this model...

Then, what the physicists actually describe is (in one sense) not the binding forces but the polarising ones, which makes their model a little easier to accept.

(But don't we have to believe that also free protons in motion polarises the EM-field - and GA-field?)

3) Mutual relations between the forces:

As for the derivations of forces from each other, the mutual relations, they should in this model be the same as between different d-degrees. It surely remains quite a lot to verify this and it probably demands of physicists some redefinitions of "forces" - of what to designate with this name.

Are there for instance any possibility to show that a two-way directed vector field (!) of G-A is the inner bond between electric and magnetic vectors in an EM-field? (E- and M-fields perhaps anti-parallel on a meta-level, in d-degree 4?)

Compare photons polarised into +/-e, that is positrons from anti-matter and electrons from matter...

More critical aspects and discussions here.