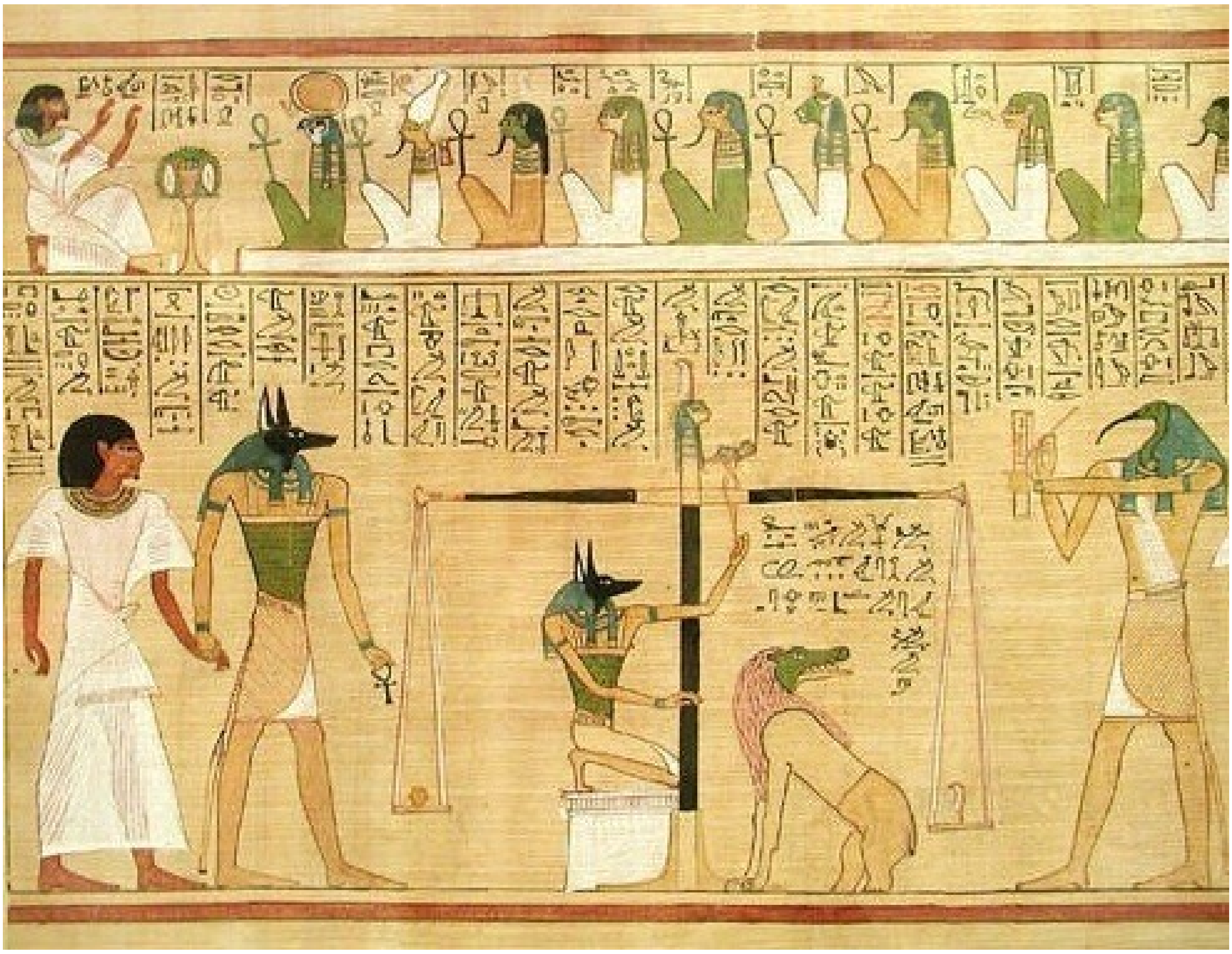
Sedenion Dark Matter Energy in Vedic Particle Physics

By John Frederick Sweeney



Abstract

Vedic Particle Physics posits 56 types of spaces in the atomic nucleus, 28 positive and 28 negative in terms of energy loss or gain. Energy is derived from functioning Dark Matter via structures which probably are isomorphic to Spinor Fields, called Sakti and Asakti in Sanskrit, and which relate directly to the Octonions and Sedenions.

Table of Contents

Introduction	3
Sedenions	7
Bhagavad Gita citations	16
Vedic Particle Physics	21
Conclusion	26
Bibliography	27

Introduction

For years the author has tried to make sense of Sedenions, after having read about them on the website of Frank “Tony” Smith and his essay, “Why Not Sedenions?”

Smith asked a very good question. To this day, very few people appreciate Sedenions, and fewer or almost no one understands their purpose. Moreover, many leading mathematicians and physicists have condemned the Octonions, from Lord Kelvin to Sir Roger Penrose, and the Octonions form the parents of the Sedenions. Smith, after Charles Muses, provides a good argument, and as is often the case, Smith comes closest to understanding strange phenomena, which are often ignored by others.

G. Srinivasan has written that the number 28 provides a control mechanism in Vedic Physics. For example, Vedic Astrology originally had 28 Nakshastra, or lunar houses, and the same arrangement was copied in Chinese astrology, although rarely used. Chinese medicine contains 28 types of wrist pulses to check the Qi flow of 14 meridians and vessels.

This paper shows that Vedic Particle Physics contains 28 positive and 28 negative energy spaces in the atomic nucleus (Sakti and Asakti), which maintain a constant full – empty relationship. That is to say that when the positive depletes, its negative counterpart increases in size, which is a simple logical assumption. This see – saw relationship provides an ideal function for Zero Divisors, as de Marrais explains above.

Robert de Marrais explored deeply into Sedenion territory in a series of essays which begin with the 42 Assessors of Ancient Egyptian mythology. This intuitive label proved right on the money, since the Egyptians possessed the same nuclear technology as the people of the Vedas, and the number 42 fits in precisely with Sedenion mathematics.

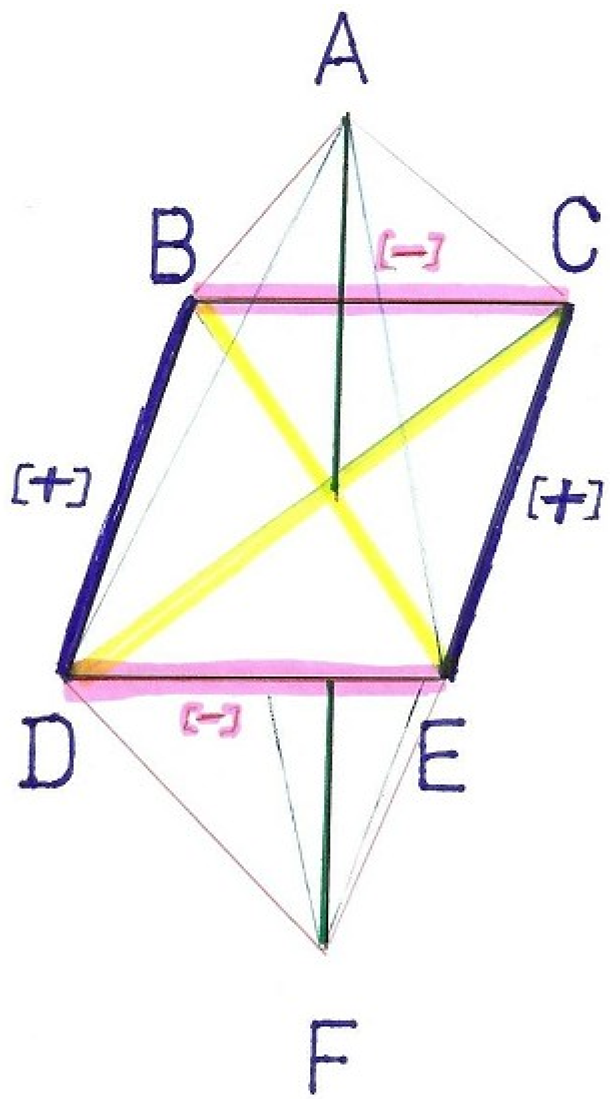
Since $i^n \neq 0$ for any imaginary unit i of any index, raised to any finite power n, the simplest ZD must entail the sum or difference of a *pair* of imaginaries, and zero will only result from the product of at least two such pairings. Rather simple by-hand calculations quickly showed one such unit must have index $L < \mathbf{G}$, and its partner have index $U > \mathbf{G}$ *not the XOR of L with* $\mathbf{G}$. This meant one could pick any octonion (7 choices) and match it with any of the 6 suitable sedenions with index > 8, making for 42 planes or *assessors* whose diagonal line-pairs contain only (and all the) ZDs. But these 84 lines do not all mutually zero-divide with each other; those which *do*, have their behavior summarized in 7 geometrically identical diagrams, the octahedral wireframe figures called box-kites. Their manner of assembly was determined by 3 simple production rules.

Given the above information, it remains possible that

42 pairs / 2 = 21, then 21 + 7 = 28

De Marrais continues:

Label the 3 vertices of some triangle among the octahedral grid's 8 with the letters A, B, C, and those of the opposite face F, E, D, so that these are at opposite ends of lines through the center $\mathbf{S}$ – AF, BE, CD – which we call *struts*. Assume each vertex represents a plane whose two units are indicated by the same letter, in upper or lower case depending on whether the index is greater or less than $\mathbf{G}$ – U and L indices respectively. Call $\mathbf{S}$, the seventh octonion index not found on a vertex, the *strut constant*, and use it to distinguish the 7 box-kites, each of which contains but 6 of the 42 sedenion assessors. For any chosen $\mathbf{S}$, there will be 3 pairs of octonions forming trips with it, and the indices forming such pairs are placed on *strut-opposite* vertices (i.e., at ends of the same strut, not edge). Neither diagonal at one end of a strut will mutually zero-divide with either at the other: some $k \cdot (A \pm a)$ will not yield zero when multiplied by any $q \cdot (F \pm f)$, k and q arbitrary real scalars. But either diagonal, at any assessor, produces zero when multiplied by *exactly one* of the assessor diagonals at the other end of a shared edge. Half the edges have "[+]" edge-currents (the diagonals slope the same way, as with $(A+a) \cdot (D+d) = (A-a) \cdot (D-d) = 0$), while the other six have edges marked "[-]" (e.g., $(A+a) \cdot (B-b) = (A-a) \cdot (B+b) = 0$). With these conventions, we can assert the production rules.



The key sentence in this paragraph is:

Call S, the seventh Octonion index not found on a vertex, the strut constant, and use it to distinguish the 7 box-kites, each of which contains but 6 of the 42 Sedenion Assessors. For any chosen S, there will be 3 pairs of Octonions forming triplets with it, and the indices forming such pairs are placed on strut-opposite vertices (i.e., at ends of the same strut, not edge).

This sentence leads to this equation:

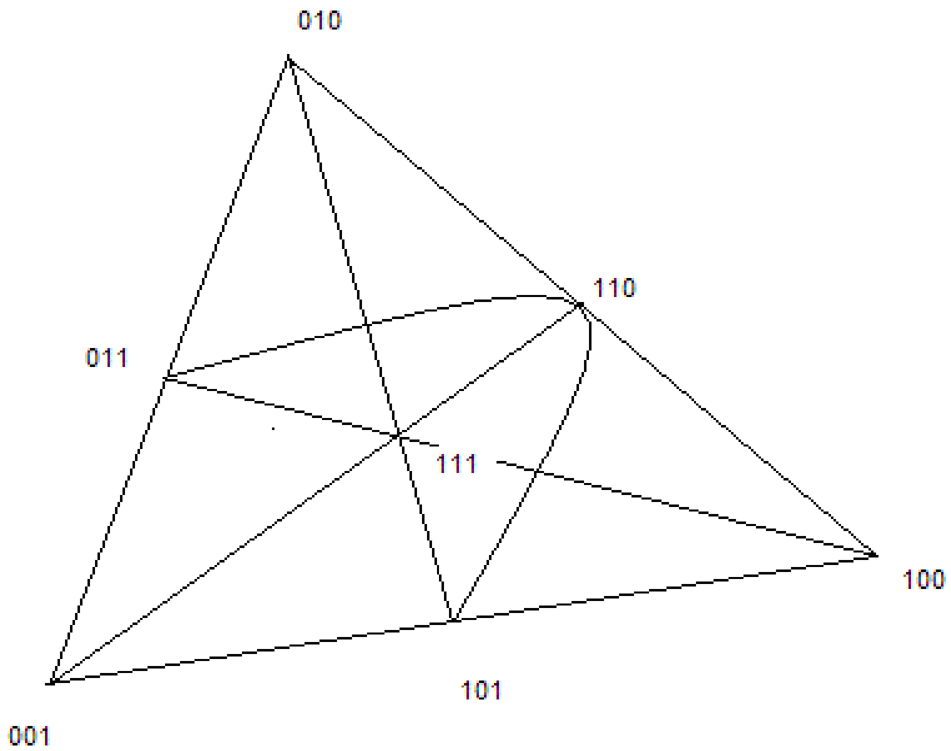
3 pairs x 7 Octonions = 21

21 + 7 (S, the seventh Octonion index) = 28

In this way, one may account for the number 28 in the Sedenions, and what de Marrais refers to as "Box Kites." Onar Aam devises a different method, which Frank "Tony" Smith refers to as Onarhedrons.

De Marrais devised the term “42 Assessors” after the panels of the Egyptian Book of the Dead which contain 42 figures who apparently weigh in on the matter of the soul of Osiris. Since the days of Wallace Budge, the Egyptologist who translated many works during the late 19th Century, westerners assume that the Book of the Dead describes funerary practices. Few have realized that the Book of the Dead in fact describes the Substratum, which is the invisible location in the Universe of Thaamic, or Dark Matter.

The process described in this paper is in fact the transformation of invisible Dark Energy matter into tangible energy. Thus it remains highly likely that the Sedenions are involved in this process, as described herein, and that the Ancient Egyptians understood this doctrine as well as the authors of Vedic Literature. In this light, de Marrais' intuitive naming of the 42 Assessors stands as a stroke of pure genius.



Fano Plane, the multiplication table for the Octonions, with binary values.

Sedenions

Discussion of Sedenions requires some initial definition. John Baez, for example, employs and entirely different term for Sedenions in his early writings on the subject. One needs to state which type of Sedenion one refers to, since the Imaedas have described one type, while Karmody and Koplinger have made use of the Conic Sedenions, which Koplinger describes in this way:

The conic sedenion relation

$$\nabla_{\mathrm{con16}} \Psi_{\mathrm{con16}} = 0 \tag{1}$$

to basis elements $b_{\mathrm{con16}} \in \{1, i_1, \ldots, i_7, i_0, \varepsilon_1, \ldots, \varepsilon_7\}$ can be transitioned from circular to hyperbolic geometry [1] using a real number coefficient α

$$\nabla_{\mathrm{con16}} := \nabla_{Q1} + \exp(\alpha i_0)\nabla_{Q2}, \tag{2}$$

$$\Psi_{\mathrm{con16}} := \Psi_{Q1} + \exp(\alpha i_0)\Psi_{Q2}, \tag{3}$$

and the following definitions:

$$\nabla_{Q1} := (-m, \partial_0, 0, 0, 0, 0, 0, 0,\ 0, 0, 0, 0, 0, 0, 0, 0), \tag{4}$$

$$\nabla_{Q2} := (0, 0, 0, 0, 0, \partial_3, -\partial_2, \partial_1,\ 0, 0, 0, 0, 0, 0, 0, 0), \tag{5}$$

$$\Psi_{Q1} := (\psi_0^{\mathrm{r}}, \psi_0^{\mathrm{i}}, \psi_1^{\mathrm{r}}, \psi_1^{\mathrm{i}}, 0, 0, 0, 0,\ 0, 0, 0, 0, 0, 0, 0, 0), \tag{6}$$

$$\Psi_{Q2} := (0, 0, 0, 0, -\psi_2^{\mathrm{r}}, \psi_2^{\mathrm{i}}, \psi_3^{\mathrm{r}}, \psi_3^{\mathrm{i}},\ 0, 0, 0, 0, 0, 0, 0, 0). \tag{7}$$

Why Not Sedenions?

Excerpts from website of Frank “Tony” Smith

Frank “Tony” Smith describes the Sedenions from a different perspective:

```
If the sedenions are regarded as the Cayley-Dickson
product of two octonion spaces, then:
if you take one 7-sphere S7 in each octonion space,
and
if you take G2 as the space of zero divisors,
then
YOU CAN CONSTRUCT FROM THE SEDENIONS the Lie group Spin(0,8)
as the twisted fibration product  S7 x S7 x G2.
Such a structure is represented
by the design of the Temple of Luxor.
```

Note here again the close association with Ancient Egypt: the root system of the Exceptional Lie Algebra G2 (the Flower of Life) is inscribed in the lower part of an Osiris temple in Egypt, presumably cut into the stone face by the Pythagoreans, a group of Greeks who traveled to Egypt in order to study the advanced technology of the Egyptians. In addition, Pythagorean Triplets may well fit into the processes which require Triplets described by de Marrais above.

Smith continues to articulate how the Sedenions work:

SEDENIONS AND CLIFFORD ALGEBRAS:

If they do not look at the whole Sedenion algebra, but represent Sedenions by their left or right adjoint actions,

When Lohmus, Paal, and Sorgsepp get interesting matrix structures.

To see how this works, first consider the Octonion algebra:
Let x and X be Octonions, and let * denote Octonion conjugation.

```
Let Lx, *Lx, LX, and *LX be octonion left-actions.

Let Rx, *Rx, RX, and *RX be octonion right-actions.
```

As Dixon shows,
the Octonion left and right actions can be represented
by 8x8 real matrices acting
on the space of 1x8 real vectors, or the space of Octonions.

Consider the 7 matrices representing the imaginary Octonions.
The anti - commutator of any two of them {Lp,Lq} = - 2 DELTA(pq)
so that the 7 matrices generate
the 128-dimensional Clifford algebra Cl(0,7),
whose even sub - algebra is 64-dimensional,
whose minimal ideal Spinor space OSPINOR is 8-dimensional.

The 0-grade 1-dimensional scalar space of Cl(0,7)
represents the Octonion real axis.
There is a 1 to 1 correspondence between the
1 x 8 minimal ideal OSPINOR on which OL acts by Clifford action,
and
the 1x8 Octonion column vectors on which
OL acts by matrix-vector action.

This not only leads to Triality in the larger Clifford algebra Cl(0,8) of Spin(0,8),
but also
to the division algebra property of Octonions,
because the map OL from OSPINOR to O is 1 to 1 and invertible.

The space OR of Octonion right-actions is equal to OL.

Now - LOOK AT SEDENIONS:

Lohmus, Paal, and Sorgsepp define Sedenion left-actions SL by
a 2x2 matrix of 8x8 matrices, which is the 16x16 matrix:

OLx -*ORx
***OLx Orx**

where *OL is the conjugate of OL and *x is the conjugate of x.

They define Sedenion right-actions SR by a 2x2 matrix of 8x8 matrices:

ORx -OL*x
OLx OR*x

Thus, they represent the Sedenion left and right actions SL and SR
by 16x16 real matrices acting on 1x16 real vectors.
Consider the 15 matrices representing the imaginary Sedenions.
The anti - commutator of any two of them {Lp,Lq} = - 2 DELTA(pq)
so that the 15 matrices generate
the 32,768-dimensional Clifford algebra Cl(0,15),
whose even sub - algebra is 16,384-dimensional,
whose minimal ideal spinor space SSPINOR is 128-dimensional.

The 0-grade 1-dimensional scalar space of Cl(0,15)
represents the Sedenion real axis.
There is an 8 to 1 correspondence between the
1x128 minimal ideal SSPINOR on which SL acts by Clifford action,
and
the 1x16 Sedenion column vectors on which
SL acts by matrix-vector action.

This leads to failure of the division algebra property of Sedenions,
because the map SL from SSPINOR to S is 8 to 1 and invertible.

Consider SLx of Sedenion left-multiplication by x
as being represented by the 16x16 real matrix

OLx -*ORx
***OLx Orx**

and

consider the 16x16 real matrices
forming the 256-dim matrix algebra R(16),
which is the Clifford Algebra Cl(0,8) of Spin(0,8):

0	2	2	2	2	2	2	2		7	5	5	5	5	5	5	5
4	4	2	2	2	2	2	2		5	7	5	5	5	5	5	5
4	4	4	2	2	2	2	2		5	5	7	5	5	5	5	5
4	4	4	4	2	2	2	2		5	5	5	7	5	5	5	5
4	4	4	4	4	2	2	2		5	5	5	5	7	5	5	5
4	4	4	4	4	4	2	2		5	5	5	5	5	7	5	5
4	4	4	4	4	4	4	2		5	5	5	5	5	5	7	5
4	4	4	4	4	4	4	4		5	5	5	5	5	5	5	7
1	3	3	3	3	3	3	3		4	4	4	4	4	4	4	4
3	1	3	3	3	3	3	3		6	4	4	4	4	4	4	4
3	3	1	3	3	3	3	3		6	6	4	4	4	4	4	4
3	3	3	1	3	3	3	3		6	6	6	4	4	4	4	4
3	3	3	3	1	3	3	3		6	6	6	6	4	4	4	4
3	3	3	3	3	1	3	3		6	6	6	6	6	4	4	4
3	3	3	3	3	3	1	3		6	6	6	6	6	6	4	4
3	3	3	3	3	3	3	1		6	6	6	6	6	6	6	8

The numbers refer to the grade in Cl(0,8) of the matrix entry:

grade	0	1	2	3	4	5	6	7	8
dimension	1	8	28	56	70	56	28	8	1

Important Notation Notes:

The two blocks of the form

0	2	2	2	2	2	2	2
4	4	2	2	2	2	2	2
4	4	4	2	2	2	2	2
4	4	4	4	2	2	2	2
4	4	4	4	4	2	2	2
4	4	4	4	4	4	2	2
4	4	4	4	4	4	4	2
4	4	4	4	4	4	4	4

are more symbolic than literal. They mean that:

the 28 entries labelled 2 correspond
to the antisymmetric part of an 8x8 matrix;

the 35 entries labelled 4 correspond
to the traceless symmetric part of an 8x8 matrix; and

the 1 entry labelled 0 corresponds
to the trace of an 8 x 8 matrix.

A more literal, but more complicated, representation
of the graded structure of those two blocks is:

0	2,4	2,4	2,4	2,4	2,4	2,4	2,4
2,4	4	2,4	2,4	2,4	2,4	2,4	2,4
2,4	2,4	4	2,4	2,4	2,4	2,4	2,4
2,4	2,4	2,4	4	2,4	2,4	2,4	2,4
2,4	2,4	2,4	2,4	4	2,4	2,4	2,4
2,4	2,4	2,4	2,4	2,4	4	2,4	2,4
2,4	2,4	2,4	2,4	2,4	2,4	4	2,4
2,4	2,4	2,4	2,4	2,4	2,4	2,4	4

However, in the more literal representation, the entries are not all independent. The more symbolic representation is a more accurate reflection of the number of independent entries of each grade.

The two blocks of the form

1	3	3	3	3	3	3	3
3	1	3	3	3	3	3	3
3	3	1	3	3	3	3	3
3	3	3	1	3	3	3	3
3	3	3	3	1	3	3	3
3	3	3	3	3	1	3	3
3	3	3	3	3	3	1	3
3	3	3	3	3	3	3	1

can be taken more literally, as they mean that:

the 8 entries labelled 1 correspond
to the diagonal part of an 8x8 matrix; and

the 56 entries labelled 3 correspond
to the off-diagonal part of an 8x8 matrix.

The even subalgebra Cle(0,8) of Cl(0,8) is then the block diagonal

0	2	2	2	2	2	2	2

4	4	2	2	2	2	2	2
4	4	4	2	2	2	2	2
4	4	4	4	2	2	2	2
4	4	4	4	4	2	2	2
4	4	4	4	4	4	2	2
4	4	4	4	4	4	4	2
4	4	4	4	4	4	4	4

4	4	4	4	4	4	4	4
6	4	4	4	4	4	4	4
6	6	4	4	4	4	4	4
6	6	6	4	4	4	4	4
6	6	6	6	4	4	4	4
6	6	6	6	6	4	4	4
6	6	6	6	6	6	4	4
6	6	6	6	6	6	6	8

```
The SLx matrix action of sedenion left-multiplication by x
restricted to the block diagonal
of the even subalgebra Cle(0,8) is then

                    OLx
                            ORx
```

```
and
the block diagonal part of the SL matrices
is just the direct sum  OL + OR
each of which is an 8x8 real matrix
acts on 8-dimensional vector space
isomorphically
to its action of 8-dimensional spinor space OSPINOR.

Denote the OL spinor space by OSPINOR+
and    the OR spinor space by OSPINOR-.

Then, the direct sum OSPINOR+  +  OSPINOR-
represent
the +half-spinor space and the -half-spinor space
of the Clifford algebra Cl(0,8) of Spin(0,8)
```

The +half-spinor space OSPINOR+ is acted on
by the OL elements of Cle(0,8) of

```
grade        0     2     4
dimension    1    28    35

while

the -half-spinor space OSPINOR- is acted on
by the OR elements of Cle(0,8) of

grade                         4     6     8
dimension                    35    28     1

we have the useful result that
the block diagonal part of the
adjoint left action SL of sedenions
represents
the 16-dimensional full spinor representation of
the Clifford algebra Cl(0,8) of the Lie algebra Spin(0,8)
```

Voila! Smith has taken this discussion to describe positive and negative half – spinor spaces of Sakti and Asakti.

Vedic Particle Physics

The following section originates from:

K.C. Sharma p. 153

The nucleus of a full atom contains 28 types of Asakti, which means to lose energy, while its opposite, Sakti, means to gain energy. Energy loss may only occur when Sakti levels reach maximum. Where Sakti exists, Asakti exists in the same location within the atomic nucleus. When Sakti energy releases, the locations become Asakti by definition.

Five Types of Sakti Spaces

	Space	Quantity	Sanskrit
1	Mental Intellect	5	
2	Karm Yonayaha	5	
3	Vayu	5	
4	Spirit	5	
5	Avidya	5	

The atomic nucleus contains three Vartma spaces, well defined and well – permuted sets, which do not decay. One Vartma exits, while two remain within the nucleus.

$$5 \times 5 = 25$$

$$25 + 3 = 28$$

The Ka particle contains eight particles in its periphery, two particles short of the ten basic mass particles (the other two being Vartmas, evidently. For more on Vartmas, please see the author's previous work on Vixra about Quarks).

Bhagavad Gita citations:

भोगैश्वर्यप्रसक्तानां तयापहृतचेतसाम् ।
व्यवसायात्मिका बुद्धिः समाधौ न विधीयते ॥२-४४॥

bhogaiśvaryaprasaktānāṃ tayāpahṛtacetasām ।
vyavasāyātmikā buddhiḥ samādhau na vidhīyate ॥2-44॥

यस्त्विन्द्रियाणि मनसा नियम्यारभतेऽर्जुन ।
कर्मेन्द्रियैः कर्मयोगमसक्तः स विशिष्यते ॥३-७॥

yas tv indriyāṇi manasā niyamyārabhate 'rjuna ।
karmendriyaiḥ karmayogam asaktaḥ sa viśiṣyate ॥3-7॥

तस्मादसक्तः सततं कार्यं कर्म समाचर ।
असक्तो ह्याचरन्कर्म परमाप्नोति पूरुषः ॥३-१९॥

tasmād asaktaḥ satataṃ kāryaṃ karma samācara ।
asakto hy ācaran karma param āpnoti pūruṣaḥ ॥3-19॥

सक्ताः कर्मण्यविद्वांसो यथा कुर्वन्ति भारत ।
कुर्याद्विद्वांस्तथासक्तश्चिकीर्षुर्लोकसंग्रहम् ॥३-२५॥

saktāḥ karmaṇy avidvāṃso yathā kurvanti bhārata ।
kuryād vidvāṃs tathāsaktaś cikīrṣur lokasaṃgraham ॥3-25॥

युक्तः कर्मफलं त्यक्त्वा शान्तिमाप्नोति नैष्ठिकीम् ।
अयुक्तः कामकारेण फले सक्तो निबध्यते ॥५-१२॥

yuktaḥ karmaphalaṃ tyaktvā śāntim āpnoti naiṣṭhikīm |
ayuktaḥ kāmakāreṇa phale sakto nibadhyate ||5-12||

बाह्यस्पर्शेष्वसक्तात्मा विन्दत्यात्मनि यत्सुखम् ।
स ब्रह्मयोगयुक्तात्मा सुखमक्षयमश्नुते ॥५-२१॥

bāhyasparśeṣv asaktātmā vindaty ātmani yat sukham |
sa brahmayogayuktātmā sukham akṣayam aśnute ||5-21||

श्रीभगवानुवाच ।
मय्यासक्तमनाः पार्थ योगं युञ्जन्मदाश्रयः ।
असंशयं समग्रं मां यथा ज्ञास्यसि तच्छृणु ॥७-१॥

śrībhagavān uvāca |
mayy āsaktamanāḥ pārtha yogaṃ yuñjan madāśrayaḥ |
asaṃśayaṃ samagraṃ māṃ yathā jñāsyasi tac chṛṇu ||7-1||

न च मां तानि कर्माणि निबध्नन्ति धनंजय ।
उदासीनवदासीनमसक्तं तेषु कर्मसु ॥९-९॥

na ca māṃ tāni karmāṇi nibadhnanti dhanaṃjaya ।
udāsīnavad āsīnam asaktaṃ teṣu karmasu ॥9-9॥

क्लेशो ऽधिकतरस्तेषामव्यक्तासक्तचेतसाम् ।
अव्यक्ता हि गतिर्दुःखं देहवद्भिरवाप्यते ॥१२-५॥

kleśo 'dhikataras teṣām avyaktāsaktacetasām ।
avyaktā hi gatir duḥkhaṃ dehavadbhir avāpyate ॥12-5॥

असक्तिरनभिष्वङ्गः पुत्रदारगृहादिषु ।
नित्यं च समचित्तत्वमिष्टानिष्टोपपत्तिषु ॥१३-९॥

asaktir anabhiṣvaṅgaḥ putradāragṛhādiṣu ।
nityaṃ ca samacittatvam iṣṭāniṣṭopapattiṣu ॥13-9॥

सर्वेन्द्रियगुणाभासं सर्वेन्द्रियविवर्जितम् ।
असक्तं सर्वभृच्चैव निर्गुणं गुणभोक्तृ च ॥१३-१४॥

sarvendriyaguṇābhāsaṃ sarvendriyavivarjitam ।
asaktaṃ sarvabhṛc caiva nirguṇaṃ guṇabhoktṛ ca ॥13-14॥

अनेकचित्तविभ्रान्ता मोहजालसमावृताः ।
प्रसक्ताः कामभोगेषु पतन्ति नरकेऽशुचौ ॥१६-१६॥

anekacittavibhrāntā mohajālasamāvṛtāḥ |
prasaktāḥ kāmabhogeṣu patanti narake 'śucau ||16-16||

यत्तु कृत्स्नवदेकस्मिन्कार्ये सक्तमहैतुकम् ।
अतत्त्वार्थवदल्पं च तत्तामसमुदाहृतम् ॥१८-२२॥

yat tu kṛtsnavad ekasmin kārye saktam ahaitukam |
atattvārthavad alpaṃ ca tat tāmasam udāhṛtam ||18-22||

असक्तबुद्धिः सर्वत्र जितात्मा विगतस्पृहः ।
नैष्कर्म्यसिद्धिं परमां संन्यासेनाधिगच्छति ॥१८-४९॥

asaktabuddhiḥ sarvatra jitātmā vigataspṛhaḥ |
naiṣkarmyasiddhiṃ paramāṃ saṃnyāsenādhigacchati ||18-49||

A future paper will analyze the above Bhagavad Gita selections in terms of Vedic Particle Physics. For the present, these lines suggest that the Gita discusses Sakti and Askati in detail. Standard translations of these lines will most likely fail to yield scientific explanations, as most translators remain unaware of the scientific nature of the Gita, caught in the glare of Maya, as it were.

Conclusion

This paper has shown basic doctrines about Sedenions by some mathematical physicists who have done considerable work in this area: de Marrais, Smith, Kevin Carmody, Geoffrey Dixon others mentioned by Smith. The thrust of this paper is to identify the Sanskrit terms Sakti and Asakti with isomorphic forms from contemporary western mathematical physics. The arguments made by those mentioned above tend to support the idea that the 28 units of Sakti and Asakti form isomorphic relations with the concepts of Spinors, Spinor Fields, half – Spinor Spaces, with positive and negative charges. Literal evidence from Vedic Particle Physics identifies Sakti and Asakti with the process of transformation of Thaamic Dark Matter, which pertains to the Substratum, into tangible forms of energy.

Circumstantial evidence indicates that the Ancient Egyptians understood this process, as did the Ancient Hindu people of the Vedas. This evidence includes the G2 root structure inscribed in the lower section of an Osiris temple, the 42 Assessors of the Egyptian Book of the Dead, and the layout of the Temple of Luxor, as Smith describes on his monumental website. Still more clues exist:

Smith writes:

The anti - commutator of any two of them {Lp,Lq} = - 2 DELTA (pq)
so that the 15 matrices generate

the 32,768-dimensional Clifford algebra Cl(0,15),
whose even sub - algebra is 16,384-dimensional,
whose minimal ideal Spinor space SSPINOR is 128-dimensional.

In a previous paper published on Vixra, the author discussed Hyper Circles in Vedic Particle Physics, and attempted to make a connection between those and the series of Exceptional Lie Algebras, with the assertion that the H7

Hyper Circle described by K.C. Sharma shares an isomorphic relationship with the Exceptional Lie Algebra E8. While this may still hold true, the concept requires further clarification and research. Work on the current paper suggests that the isomorphic relationship exists between the H7 Hyper Sphere and the group S7, which is closely related to the Sedenions. The Exceptional Lie Algebra E8 may form an isomorphic relationship with the H8 Hyper Sphere, which is composed of two H7 hyper spheres and one additional particle.

G. Srinivasan has written that in actuality, dimensions do not actually exist in the real Universe, although western mathematicians find them useful. If one were to take

the 32,768-dimensional Clifford algebra Cl(0,15),
whose even sub - algebra is 16,384-dimensional,

and transform these dimensions into quantifiable terms, then we might say

32.768 and 16.384

By doing so, one might approximate the unit sizes of the Hyper Spheres H7 and H8, as per Sharma:

Structure	**Quantity**	**Event**
Clifford algebra Cl(0,15)	32.77	
sub - algebra	16.38	
H7 Hyper Sphere	33.07	
H8 Hyper Sphere	32.47	
Maxima of H7 + H8	33.1323046	Largest size reached
Difference between maxima and H7	0.66	
Bohr Liquid Drop Model 1937	**6×10^{-15}**	
H15 Hyper Sphere	5.72	RTA Radiation released
Boltzmann Constant	**5.668×10^{-8} watt / m^2K^4**	

Sharma suggests that his H7 and H8 numbers are multiples of Bohr's number, and that his H15 number approximates the Boltzmann Constant. In the same way, minor differences separate Sharma's calculations, which are based on Euclidean geometry, and Smiths dimensions for Clifford algebra Cl(0,15) and its sub – algebra.

There it is, in a nutshell, as it were, as it is, according to the Bhagavad Gita. This paper perhaps requires further explanation, but for the present, this paper presents the gist of work by giants, which has only come together during the writing of this paper. What they all have to say coheres, and mutually confirms the work of others, even the western mathematical physicists positions placed against ancient Vedic Particle Physics.

That is to say that the concepts of Sakti and Asakti appear to form isomorphic relations with Spinors, Spinor Fields, Octonions and Sedenions. The quantities given in this conclusion serve to seal the paper with an official seal – it would prove difficult to come up with closer correspondences between these quantities. Unfortunately, the software used to write this paper acts strangely with decimals, and repeated attempts to provide the full decimal figures failed. The interested reader might refer to the author's earlier paper on Quarks which give all the numerical values for Hyper Spheres in Vedic Particle Physics.

For further details, the interested reader may refer to the sources listed in the Bibliography.

Many thanks to Jens Koplinger for his assistance in gaining access to papers published in the 1970's by Charles Muses.

Bibliography

Kevin Carmody, papers on Conic Sedenions.

Frank “Tony” Smith website. “Why Not Sedenions?”

Secret of Sankhya, G. Srinivasan, 2008.

Vedic Particle Physics, K.C. Sharma, Delhi, 2009.

Voyage by Catamaran:
Effecting Semantic Network *Bricolage* via
Infinite-Dimensional Zero-Divisor Ensembles

Robert P. C. de Marrais *
Thothic Technology Partners, P.O.Box 3083, Plymouth MA 02361

August 27, 2008

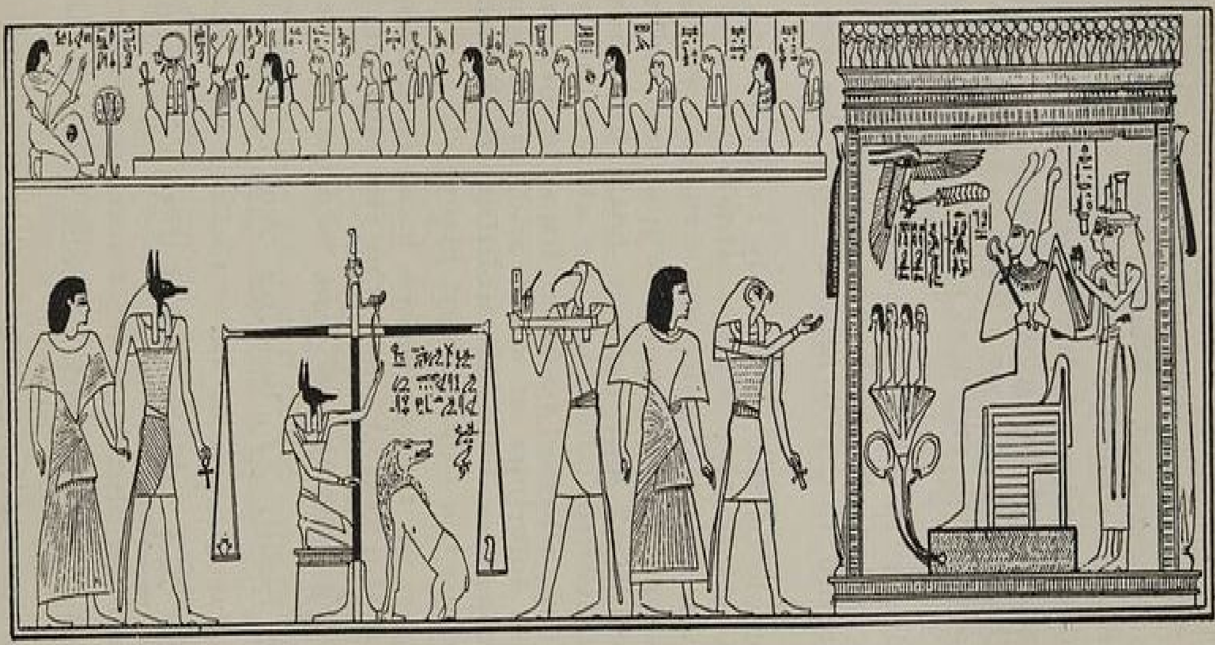
Signature of gravity in conic sedenions

Jens Köplinger

Prisage Ltd., 406 Aberdeen Ter, Greensboro, NC 27403, USA

The author may be contacted at jaq2013 at outlook dot com

Appendix

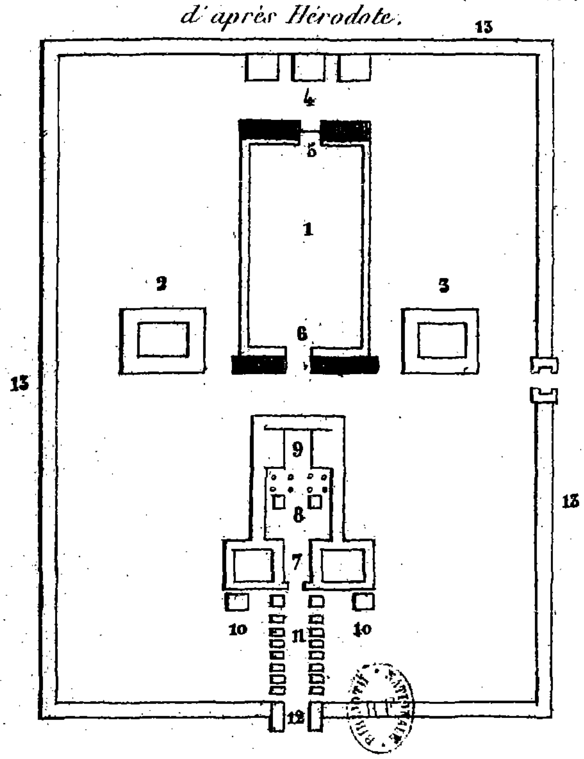


SCENE OF THE WEIGHING OF THE HEART IN THE HALL OF OSIRIS.
(From British Museum Papyrus, No. 9,901.)

The 42 Assessors sit in 21 pairs in the top panel. Note that they are placed above the Underworld, or Substratum in Vedic Physics. This signals the transformation of Thaamic Dark Matter into visible energy.

RESTAURATION DES RUINES DE SAÏS.

d'après Hérodote.

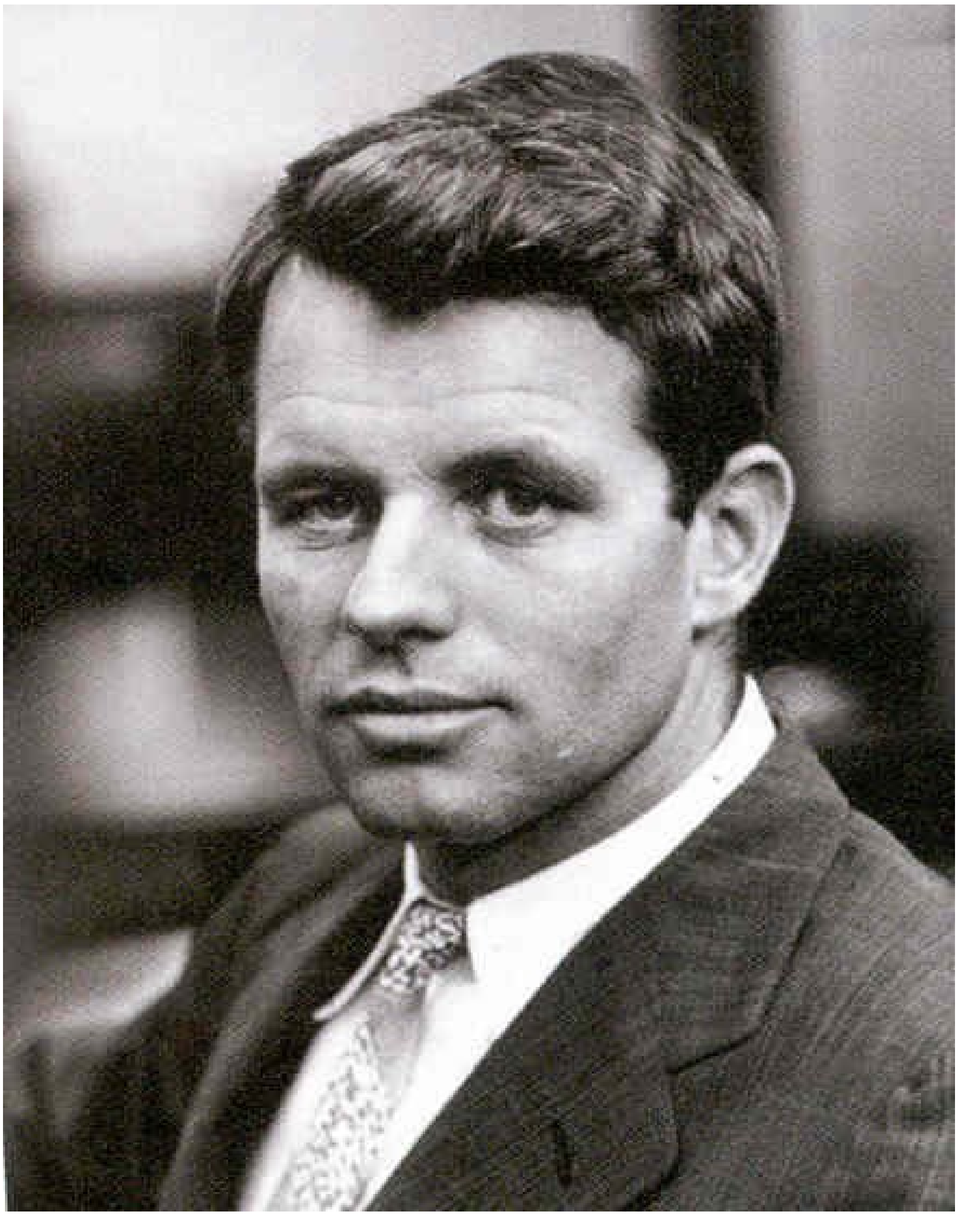


1. *Grande Nécropole ou Memnonia.*
2. *Tombeau d'Apriès et des rois Saïtes.*
3. *Tombeau d'Amasis.*
4. *Tombeaux divins.*

5 6. *Pylônes.*

7. *Temple de Néith ? ?*
8. *Obélisques d'Amasis.*
9. *Téménos du Temple.*
10. *Colosses d'Amasis.*
11. *Androsphynxs d'Amasis.*
12. *Propylon d'Amasis.*
13. *Enceinte générale de l'Hiéron.*

Dedication



Some men look at things and ask, "Why?"

I look at things that never were, and ask, "Why not?"

So let us dedicate ourselves to what the Greeks wrote so long ago:
To tame the savageness of man and make gentle the life of this world.

Robert Francis Kennedy