



SEPHER SAPPHIRES:

A TREATISE ON GEMATRIA

THE MAGICAL LANGUAGE

VOLUME II

יהוה

WADE COLEMAN

Appendix 1

Gematria Tables

Hebrew									
No.	1	2	3	4	5	6	7	8	9
Name	Aleph ¹	Beth	Gimel	Daleth	Heh	Vav	Zain	Cheth	Teth
	א	ב	ג	ד	ה	ו	ז	ח	ט
No.	10	20	30	40	50	60	70	80	90
Name	Yod	Kaph	Lamed	Mem	Nun	Samekh	Ayin	Peh	Tzaddi
	י	כ	ל	מ	נ	ס	ע	פ	צ
No.	100	200	300	400	500	600	700	800	900
Name	Qoph	Resh	Shin	Tav	Final Kaph	Final Mem	Final Nun	Final Peh	Final Tzaddi
	ק	ר	ש	ת	ך	ם	ן	ף	ץ

¹ When Aleph is written large א its value is 1000.

Qabalah of the 9 chambers is a method where the number is reduced to the smallest single digit. This is called Thesopic Reduction For Example: $800 = 8 + 0 + 0 = 8$

The Qabalah of the 9 Chambers									
Shin	Lamed	Gimel	Resh	Kaph	Beth	Qoph	Yod	Aleph	
ש	ל	ג	ר	כ	ב	ק	י	א	
300	30	3	200	20	2	100	10	1	
Final Mem	Samekh	Vav	Final Kaph	Nun	Heh	Tau	Mem	Daleth	
ם	ס	ו	ך	נ	ה	ת	מ	ד	
600	60	6	500	50	5	400	40	4	
Final Tzaddi	Tzaddi	Teth	Final Peh	Peh	Cheth	Final Nun	Ayin	Zain	
ץ	צ	ט	ף	פ	ח	ן	ע	ז	
900	90	9	800	80	8	700	70	7	

Greek Table									
No.	1	2	3	4	5	6	7	8	9
Name	Alpha	Beta	Gamma	Delta	Epsilon		Zeta	Eta	Theta
upper case	A	B	Γ	Δ	E		Z	H	Θ
lower case	α	β	γ	δ	ε		ζ	η	θ
No.	10	20	30	40	50	60	70	80	90
Name	Iota	Kappa	Lambda	Mu	Nu	Xi	Omicron	Pi	
upper case	I	K	Λ	M	N	Ξ	O	Π	
lower case	ι	κ	λ	μ	ν	ξ	ο	π	
No.	100	200	300	400	500	600	700	800	
Name	Rho	Sigma	Tau	Upsilon	Phi	Chi	Psi	Omega	
upper case	P	Σ	T	Υ	Φ	X	Ψ	Ω	
lower case	ρ	σ, ζ	τ	υ	φ	χ	ψ	ω	

Roman Letters in Qabalah Simplex										
No.	1	2	3	4	5	6	7	8	9	10
	A	B	C	D	E	F	G	H	I (J)	L
	11	12	13	14	15	16	17	18	19	20
	M	N	O	P	Q	R	S	T	V (U)	X
	21	22								
	Y	Z								

I have seen several methods to derive the numerical values of English letters. This is the simplest and makes the most sense.

English Letters in Qabalah Simplex										
No.	1	2	3	4	5	6	7	8	9	10
	A	B	C	D	E	F	G	H	I	J
	11	12	13	14	15	16	17	18	19	20
	K	L	M	N	O	P	Q	R	S	T
	21	22	23	24	25	26				
	U	V	W	X	Y	Z				

The Cabala Simplex of the 9 Chambers

A	J	S		B	K	T		C	L	U
1	10	19		2	11	20		3	12	21
D	M	V		E	N	W		F	O	X
4	13	22		5	14	23		6	15	24
G	P	Y		H	Q	Z		I	R	
7	16	25		8	17	26		9	18	

Hebrew Letters Spelled in Full (Miliui method)

Hebrew	Spelled in Full	Value	Hebrew	Spelled in Full	Value
א	אלף	111	ל	למד	74
ט	נה	412	ם	מים	90
י	נמל	73	נ	נז	106
ז	זלת	474	ס	סמך	120
ח	חא	6	ע	עז	130
י	יז	12	פ	פז	91
י	יז	67	צ	צז	104
כ	כז	418	ק	קז	186
כ	כז	419	ר	רז	510
י	יז	20	ש	שז	360
ט	טז	100	ת	תז	406

Appendix 2

The Nature of Numbers

The following is an excerpt from the *Cube of Space* by Kevin Townley. This passage relates the different characteristics of numbers to the four worlds of the Cabala.

Consider the **Point**, and the three geometrical forms, the triangle, the hexagram, and the enneagram [9 sided figure]. The point and these three forms are representative of the first sphere Kether, the third sphere Binah, the sixth sphere Tiphareth, and the ninth sphere of Yesod. These forms and, hence, their numbers bring us to a very important consideration concerning creation.

Jah created the universe using numbers, letters and sounds. The words *Ayin Soph Aur* contain 9 letters, *Ayin Soph* contains 6, and *Ayin* contains 3 letters. When taking these three numbers, 9, 6, and 3, we find that they hold a special function in the creation of the universe. In fact, there are only four real numbers: 1, 3, 6, and 9. This, of course, sounds absurd at first; yet if we look beyond the surface of appearance, we find this to be true. All other numbers are different expressions of 1, 3, 6, and 9.

Indeed, everything is One because all things come from One, as the Emerald Tablet states. The All is One. One is the undifferentiated and infinite possibility, and its reflection gives rise to the expression of the Father, the Number Two.

The All is three because the One Life always expresses itself through the Trinity or the Supernal Triad. The union of One and its reflection, 2, takes us from the negative veils of undifferentiated potential to the world of differentiated potential. This gives rise to the idea of the Trinity, $1+2=3$, and the vehicle of the Mother, the vital ingredient for manifestation. The union of these forces are $1+2+3=6$, and this brings us to the third of the four numbers of creation, 6.

The All is six, as it expresses itself through the agencies of the Divine Mother and the Divine Father, where the six directions of the Cube of Space are sealed, bringing forth a new generation, the **Son/Sun**. Furthermore, it is through the process of separation, or division, that manifestation comes into being. If we were to take the number 3, the number of the Divine Mother and sphere of Saturn, and divide it by .5, we find the number 6, the sphere of the Divine Son/Sun.

The All is nine, for there are nine letters in the third veil of Negative Existence and nine is also the number which completes the cycle of numbers. Nine is also the product of the Magic Square of the Divine Mother, $3 \times 3 = 9$. After nine, we return again to the number one and the cycle begins all over again and continues on infinitely

At this point, we have become familiar with the basic cycle of numbers from one to nine. In esoteric sciences, the numbers from one to nine are used for mystical studies. There are other areas in the study of number that speak to the creative process of the *Ayin Soph Aur* and the numbers 1, 3, 6, and 9.

Kether is the tenth aspect in relationship to the *Ayin Soph Aur*, which is the line of demarcation between negative existence and positive existence. This begins the cycle of numbers at a new level of expression.

Now let's consider the statement that there are only four real numbers, 1, 3, 6 and 9, and that all other numbers are expressions of one of these four numbers. As there are four worlds in the Qabalah, there are the four levels in which numbers manifest. They are called: apparent, reduced, extended, and root numbers.

Apparent numbers are quite simply the numbers we use on a day-to-day basis, and are symbolic of the world of *Assiah*. This is exemplified in the Tarot by the suit of Pentacles, and Key Fifteen, The Devil, sign of cardinal earth. The hand of the Devil is in a position which says, "What you see is all the reality there is." We need to look beyond the surface of appearance to gain the whole truth of a matter, just as we must maneuver a cube in order to see all its sides.

Any number being dealt with has an apparent value. This explanation is not an attempt to disregard apparent numbers but alert us to the fact that much more lies beneath the surface.

Reduced numbers are symbolic of the world *Yetzirah*, and are mostly used in the science of numerology. This is the reduction of any multi-digit number to a single digit. This reduces otherwise complex digits to a common ground in order to gain an understanding of the basic quality of the otherwise infinite. For example, the number 358, reduces to $3+5+8=16$, $1+6=7$. Through reduction, the number 358 can be expressed as the number 7. This process is called **Theosophical Reduction**.

Extended numbers, symbolic of the *Briatic* world, allow us to examine the greater relationships between numbers. Extending numbers is called **Theosophical Extension**. Through theosophical extension, we can see the total influence contained within a number and its underlying relationship between different numbers and words of the same value. This process is used most extensively in the science of gematria, where relationships of letter and number are explored. An example of this can be seen in the number 4 - adding number four's total value, we find that the number 4 extended has the value of 10, $1+2+3+4=10$, and $10=1+0=1$. This tells us that the number 4 and 10 have a profound relationship with each other and they each express a unique quality of the number 1, just as each center of expression manifests the essence of the One.

There are a couple of formulae that allow the student to find the extended value of any size number, as well as reversing the process to discover what a particular number is an extension of. To find the extension of a given number, use the following formula:

$$n \times (n + 1)/2 = \text{extension}$$

We will use the example of 31, which is the value of EL, Lamed + Aleph, the divine name given to the fourth sphere on the Tree of Life, Chesed. The name means God.

$$n = 31, n + 1 = 32 \quad (31 \times 32)/2 = 992/2 = 496$$

496 is the extension of 31 and the value of Malkuth [מַלְכוּת].

This tells us that the extension of 31, is the extension of the creative powers of God, manifesting in the sphere of the earth, Malkuth, 496.

Root numbers associated with the *Atziluthic* World, tell us that there is an underlying unity in all things, and that the One has three basic modes of expression. The following numerical chart reveals the four types of numbers.

Assiah	Apparent	1	2	3	4	5	6	7	8	9	10	11	12	13
Yetzirah	Reduced	1	2	3	4	5	6	7	8	9	1	2	3	4
Briah	Extended	1	3	6	10	15	21	28	36	45	55	66	78	91
Atziluth	Root	1	3	6	1	6	3	1	9	9	1	3	6	1

Now each number in the last horizontal row is the result of an extension, and then reduction of a number, which reveals the numbers of 1, 3, 6, or 9. In the first two rows, the numbers remain identical from one through nine. Once they go beyond single digits, the apparent numbers take on their own form while their reduced value brings them back within the one through nine number cycle.

The third row takes these numbers and shows their quantitative value, and expresses them in a multi-digit form when it applies. The final value in the last row takes the quantitative value and reduces it to a single digit which reveals the series 1-3-6-1-6-3-1-9-9. This series goes on infinitely. Now if we take this one step further and break the series into its trinitarian expression (1-3-6), (1-6-3), (1-9-9), then add the sum of each group, we find that the trinity always expresses the one, $1+3+6=10$, $1+0=1$, $1+9+9 = 19 = 1$. Each of the three groups reduces to one, and the One expresses itself through 3.

$$\begin{array}{ccccccc} (1+3+6)=10, & (1+6+3)=10, & (1+9+9)=10 \\ 1 & + & 1 & + & 1 & = & 3 \end{array}$$

"All things are from One by the mediation of One, and all things have their birth from this one thing by adaptation." The One Life is the root of all existence and is continually expressed through the Trinity

Cube of Space (Chapter 2, pp. 39-42)

Appendix 3

Theosophic Extensions¹

Theosophic Extensions from 1 to 120							
#	Extension	#	Extension	#	Extension	#	Extension
1	1	31	496	61	1,891	91	4,186
2	3	32	528	62	1,953	92	4,278
3	6	33	561	63	2,016	93	4,371
4	10	34	595	64	2,080	94	4,465
5	15	35	630	65	2,145	95	4,560
6	21	36	666	66	2,211	96	4,656
7	28	37	703	67	2,278	97	4,753
8	36	38	741	68	2,346	98	4,851
9	45	39	780	69	2,415	99	4,950
10	55	40	820	70	2,485	100	5,050
11	66	41	861	71	2,556	101	5,151
12	78	42	903	72	2,628	102	5,253
13	91	43	946	73	2,701	103	5,356
14	105	44	990	74	2,775	104	5,460
15	120	45	1,035	75	2,850	105	5,565
16	136	46	1,081	76	2,926	106	5,671
17	153	47	1,128	77	3,003	107	5,778
18	171	48	1,176	78	3,081	108	5,886
19	190	49	1,225	79	3,160	109	5,995
20	210	50	1,275	80	3,240	110	6,105
21	231	51	1,326	81	3,321	111	6,216
22	253	52	1,378	82	3,403	112	6,328
23	276	53	1,431	83	3,486	113	6,441
24	300	54	1,485	84	3,570	114	6,555
25	325	55	1,540	85	3,655	115	6,670
26	351	56	1,596	86	3,741	116	6,786
27	378	57	1,653	87	3,828	117	6,903
28	406	58	1,711	88	3,916	118	7,021
29	435	59	1,770	89	4,005	119	7,140
30	465	60	1,830	90	4,095	120	7,260

¹ In mathematics the theosophic extension is called the summation and is represented by the Greek letter Σ . Therefore the summation of 6 is $\Sigma 6 = 1+2+3+4+5+6 = 21$.

Appendix 4

Roots of Numbers

Roots of Numbers									
#	Roots	#	Roots	#	Roots	#	Roots	#	Roots
1	Prime	41	Prime	81	3^4	121	11^2	161	7×23
2	Prime	42	$2 \times 3 \times 7$	82	2×41	122	2×61	162	2×3^4
3	Prime	43	Prime	83	Prime	123	3×41	163	Prime
4	2^2	44	11×2^2	84	$3 \times 7 \times 2^2$	124	31×2^2	164	$2^2 \times 41$
5	Prime	45	5×3^2	85	5×17	125	5^3	165	$3 \times 5 \times 11$
6	2×3	46	2×23	86	2×43	126	$2 \times 7 \times 3^2$	166	2×83
7	Prime	47	Prime	87	3×29	127	Prime	167	Prime
8	2^3	48	3×2^4	88	11×2^3	128	2^7	168	$2^3 \times 3 \times 7$
9	3^2	49	7^2	89	Prime	129	3×43	169	13^2
10	2×5	50	2×5^2	90	$2 \times 5 \times 3^2$	130	$2 \times 5 \times 13$	170	$2 \times 5 \times 17$
11	Prime	51	3×17	91	7×13	131	Prime	171	$3^2 \times 19$
12	3×2^2	52	13×2^2	92	23×2^2	132	$3 \times 11 \times 2^2$	172	$2^2 \times 43$
13	Prime	53	Prime	93	3×31	133	7×19	173	Prime
14	2×7	54	2×3^3	94	2×47	134	2×67	174	$2 \times 3 \times 29$
15	3×5	55	5×11	95	5×19	135	5×3^3	175	7×5^2
16	2^4	56	7×2^3	96	3×2^5	136	17×2^3	176	$2^4 \times 11$
17	Prime	57	3×19	97	Prime	137	Prime	177	3×59
18	2×3^2	58	2×29	98	2×7^2	138	$2 \times 3 \times 23$	178	2×89
19	Prime	59	Prime	99	11×3^2	139	Prime	179	Prime
20	5×2^2	60	$2^2 \times 5 \times 3$	100	$2^2 \times 5^2$	140	$5 \times 7 \times 2^2$	180	$2^2 \times 5 \times 3^2$
21	3×7	61	Prime	101	Prime	141	3×47	181	Prime
22	2×11	62	2×31	102	2×51	142	2×71	182	$2 \times 7 \times 13$
23	Prime	63	7×3^2	103	Prime	143	11×13	183	3×61
24	3×2^3	64	2^6	104	13×2^3	144	$2^4 \times 3^2$	184	23×2^3
25	5^2	65	5×13	105	$3 \times 5 \times 7$	145	5×29	185	5×37
26	2×13	66	$2 \times 3 \times 11$	106	2×53	146	2×73	186	$2 \times 3 \times 31$
27	3^3	67	Prime	107	Prime	147	3×7^2	187	11×17
28	7×2^2	68	17×2^2	108	$3^3 \times 2^2$	148	37×2^2	188	$2^2 \times 47$
29	Prime	69	3×23	109	Prime	149	Prime	189	$3^3 \times 7$
30	$2 \times 3 \times 5$	70	$2 \times 5 \times 7$	110	$2 \times 5 \times 11$	150	$2 \times 3 \times 5^2$	190	$2 \times 5 \times 19$
31	Prime	71	Prime	111	3×37	151	Prime	191	Prime
32	2^5	72	$2^3 \times 3^2$	112	7×2^4	152	19×2^3	192	$2^6 \times 3$
33	3×11	73	Prime	113	Prime	153	3×51	193	Prime
34	2×17	74	2×37	114	2×57	154	$2 \times 7 \times 11$	194	2×97
35	5×7	75	3×5^2	115	5×23	155	5×31	195	$3 \times 5 \times 13$
36	$2^2 \times 3^2$	76	19×2^2	116	29×2^2	156	$3 \times 13 \times 2^2$	196	$2^2 \times 7^2$
37	Prime	77	7×11	117	3×39	157	Prime	197	Prime
38	2×19	78	$2 \times 3 \times 13$	118	2×59	158	2×79	198	$2 \times 3^2 \times 11$
39	3×13	79	Prime	119	7×17	159	3×53	199	Prime
40	5×2^3	80	5×2^4	120	$3 \times 5 \times 2^3$	160	5×2^5	200	$2^3 \times 5^2$

Roots of Numbers

#	Roots	#	Roots	#	Roots	#	Roots	#	Roots
201	3x67	241	Prime	281	Prime	321	3x107	361	19 ²
202	2x101	242	2x11 ²	282	2x3x47	322	2x7x23	362	2x181
203	7x29	243	3 ⁵	283	Prime	323	17x19	363	3x11 ²
204	2 ² x3x17	244	2 ² x61	284	2 ² x71	324	2 ² x9 ²	364	2 ² x7x13
205	5x41	245	5x7 ²	285	3x5x19	325	13x5 ²	365	5x73
206	2x103	246	2x3x41	286	2x11x13	326	2x163	366	2x3x61
207	3 ² x23	247	13x19	287	7x41	327	3x109	367	Prime
208	2 ⁴ x13	248	2 ³ x31	288	2 ⁵ x3 ²	328	2 ³ x41	368	2 ⁴ x23
209	11x19	249	3x83	289	17 ²	329	7x47	369	3 ² x41
210	2x3x5x7	250	2x5 ³	290	2x5x29	330	2x3x5x11	370	2x5x37
211	Prime	251	Prime	291	3x97	331	Prime	371	7x53
212	2 ² x53	252	2 ² x7x3 ²	292	2 ² x73	332	2 ² x83	372	2 ² x3x31
213	3x71	253	11x23	293	Prime	333	3 ² x37	373	Prime
214	2x107	254	2x127	294	2x3x7 ²	334	2x167	374	2x11x17
215	5x43	255	3x5x17	295	5x59	335	5x67	375	3x5 ³
216	2 ³ x3 ³	256	2 ⁸	296	2 ³ x37	336	2 ⁴ x3x7	376	2 ³ x47
217	7x31	257	Prime	297	3 ³ x11	337	Prime	377	13x29
218	2x109	258	2x3x43	298	2x149	338	2x13 ²	378	2x3 ³ x7
219	3x73	259	7x37	299	13x23	339	3x113	379	Prime
220	2 ² x5x11	260	2 ² x5x13	300	2 ² x3x5 ²	340	2 ² x5x17	380	2 ² x5x19
221	13x17	261	3 ² x29	301	7x43	341	11x31	381	3x127
222	2x3x37	262	2x131	302	2x151	342	2x3 ² x19	382	2x191
223	Prime	263	Prime	303	3x101	343	7 ³	383	Prime
224	7x2 ⁵	264	2 ³ x3x11	304	2 ⁴ x19	344	2 ³ x43	384	2 ⁷ x3
225	5 ² x3 ²	265	5x53	305	5x61	345	3x5x23	385	5x7x11
226	3x113	266	2x7x19	306	2x3x51	346	2x173	386	2x193
227	Prime	267	3x89	307	Prime	347	Prime	387	3 ² x43
228	2 ² x3x19	268	2 ² x67	308	2 ² x7x11	348	2 ² x3x29	388	2 ² x97
229	Prime	269	Prime	309	3x103	349	Prime	389	Prime
230	2x5x23	270	2x5x3 ³	310	2x5x31	350	2x5 ² x7	390	2x3x5x13
231	3x7x11	271	Prime	311	Prime	351	3 ³ x13	391	17x23
232	2 ³ x29	272	2 ⁴ x17	312	2 ³ x3x13	352	2 ⁵ x11	392	2 ³ x7 ²
233	Prime	273	3x7x13	313	Prime	353	Prime	393	3x131
234	2x3 ² x13	274	2x137	314	2x157	354	2x3x59	394	2x197
235	5x47	275	5 ² x11	315	3 ² x5x7	355	5x71	395	5x79
236	2 ² x59	276	2 ² x3x23	316	2 ² x79	356	2 ² x89	396	2 ² x3 ² x11
237	3x79	277	Prime	317	Prime	357	3x7x17	397	Prime
238	2x7x17	278	2x139	318	2x3x53	358	2x179	398	2x199
239	Prime	279	3 ² x31	319	11x29	359	Prime	399	3x7x19
240	2 ⁴ x3x5	280	2 ³ x5x7	320	2 ⁶ x5	360	2 ³ x3 ² x5	400	2 ⁴ x5 ²

Roots of Numbers

#	Roots	#	Roots	#	Roots	#	Roots	#	Roots
401	Prime	441	$3^2 \times 7^2$	481	13×37	521	Prime	561	$3 \times 11 \times 17$
402	$2 \times 3 \times 67$	442	$2 \times 13 \times 17$	482	2×241	522	$2 \times 3^2 \times 29$	562	2×281
403	13×31	443	Prime	483	$3 \times 7 \times 23$	523	Prime	563	Prime
404	$2^2 \times 101$	444	$2^2 \times 3 \times 37$	484	$2^2 \times 11^2$	524	$2^2 \times 131$	564	$2^2 \times 3 \times 47$
405	$3^4 \times 5$	445	5×89	485	5×97	525	$3 \times 5^2 \times 7$	565	5×113
406	$2 \times 7 \times 29$	446	2×223	486	2×3^5	526	2×263	566	2×283
407	11×37	447	3×149	487	Prime	527	17×31	567	$3^4 \times 7$
408	$2^3 \times 51$	448	$2^6 \times 7$	488	$2^3 \times 61$	528	$2^4 \times 3 \times 11$	568	$2^3 \times 71$
409	Prime	449	Prime	489	3×163	529	23^2	569	Prime
410	$2 \times 5 \times 41$	450	$2 \times 3^2 \times 5^2$	490	$2 \times 5 \times 7^2$	530	$2 \times 5 \times 53$	570	$2 \times 3 \times 5 \times 19$
411	3×137	451	11×41	491	Prime	531	$3^2 \times 59$	571	Prime
412	$2^2 \times 103$	452	$2^2 \times 113$	492	$2^2 \times 3 \times 41$	532	$2^2 \times 7 \times 19$	572	$2^2 \times 11 \times 13$
413	7×59	453	3×151	493	17×29	533	13×41	573	3×191
414	$2 \times 3^2 \times 23$	454	2×227	494	$2 \times 13 \times 19$	534	$2 \times 3 \times 89$	574	$2 \times 7 \times 41$
415	5×83	455	$5 \times 7 \times 13$	495	$3^2 \times 5 \times 11$	535	5×107	575	$5^2 \times 23$
416	$2^5 \times 13$	456	$2^3 \times 3 \times 19$	496	$2^4 \times 31$	536	$2^3 \times 67$	576	$2^6 \times 3^2$
417	3×139	457	Prime	497	7×71	537	3×179	577	Prime
418	$2 \times 11 \times 19$	458	2×229	498	$2 \times 3 \times 83$	538	2×269	578	2×17^2
419	Prime	459	$3^3 \times 17$	499	Prime	539	$7^2 \times 11$	579	3×193
420	$2^2 \times 3 \times 5 \times 7$	460	$2^2 \times 5 \times 23$	500	$2^2 \times 5^3$	540	$2^2 \times 3^3 \times 5$	580	$2^2 \times 5 \times 29$
421	Prime	461	Prime	501	3×167	541	Prime	581	7×83
422	2×211	462	$2 \times 3 \times 7 \times 11$	502	2×251	542	2×271	582	$2 \times 3 \times 97$
423	$3^2 \times 57$	463	Prime	503	Prime	543	3×181	583	11×53
424	$2^3 \times 47$	464	$2^4 \times 29$	504	$2^3 \times 3^2 \times 7$	544	$2^5 \times 17$	584	$2^3 \times 73$
425	$5^2 \times 17$	465	$3 \times 5 \times 31$	505	5×101	545	5×109	585	$3^2 \times 5 \times 13$
426	$2 \times 3 \times 71$	466	2×233	506	$2 \times 11 \times 23$	546	$2 \times 3 \times 7 \times 13$	586	2×293
427	7×61	467	Prime	507	3×13^2	547	Prime	587	Prime
428	$2^2 \times 107$	468	$2^2 \times 3 \times 39$	508	$2^2 \times 127$	548	$2^2 \times 137$	588	$2^2 \times 3 \times 7^2$
429	$3 \times 11 \times 13$	469	7×67	509	Prime	549	$3^2 \times 61$	589	19×31
430	$2 \times 5 \times 43$	470	$2 \times 5 \times 47$	510	$2 \times 5 \times 51$	550	$2 \times 5^2 \times 11$	590	$2 \times 5 \times 59$
431	Prime	471	3×157	511	7×73	551	19×29	591	3×197
432	$2^4 \times 3^3$	472	$2^3 \times 59$	512	2^9	552	$2^3 \times 3 \times 23$	592	$2^4 \times 37$
433	Prime	473	11×43	513	$3^3 \times 19$	553	7×79	593	Prime
434	$2 \times 7 \times 31$	474	$2 \times 3 \times 79$	514	2×257	554	2×277	594	$2 \times 3^3 \times 11$
435	$5 \times 3 \times 29$	475	$5^2 \times 19$	515	5×103	555	$3 \times 5 \times 37$	595	$5 \times 7 \times 17$
436	$2^2 \times 109$	476	$2^2 \times 7 \times 17$	516	$2^2 \times 3 \times 43$	556	$2^2 \times 139$	596	$2^2 \times 149$
437	19×23	477	$3^2 \times 53$	517	11×47	557	Prime	597	3×199
438	$2 \times 3 \times 73$	478	2×239	518	$2 \times 7 \times 37$	558	$2 \times 3^2 \times 31$	598	$2 \times 13 \times 23$
439	Prime	479	Prime	519	3×173	559	13×43	599	Prime
440	$2^3 \times 5 \times 11$	480	$2^5 \times 3 \times 5$	520	$2^3 \times 5 \times 13$	560	$2^4 \times 5 \times 7$	600	$2^3 \times 3 \times 5^2$

Roots of Numbers

#	Roots	#	Roots	#	Roots	#	Roots	#	Roots
601	Prime	641	Prime	681	3x227	721	7x103	761	Prime
602	2x7x43	642	2x3x107	682	2x11x31	722	2x19 ²	762	2x3x127
603	3 ² x67	643	Prime	683	Prime	723	3x241	763	7x109
604	2 ² x151	644	2 ² x7x23	684	2 ² x3 ² x19	724	2 ² x181	764	2 ² x191
605	5x11 ²	645	3x5x43	685	5x137	725	5 ² x29	765	5x3x51
606	2x3x101	646	2x17x19	686	2x7 ³	726	2x3x11 ²	766	2x383
607	Prime	647	Prime	687	3x229	727	Prime	767	13x59
608	2 ⁵ x19	648	2 ³ x3 ⁴	688	2 ⁴ x43	728	2 ³ x7x13	768	2 ⁸ x3
609	3x7x29	649	11x59	689	13x53	729	3 ⁶	769	Prime
610	2x5x61	650	2x5 ² x13	690	2x3x5x23	730	2x5x73	770	2x5x7x11
611	13x47	651	3x7x31	691	Prime	731	17x43	771	3x257
612	2 ² x3 ² x17	652	2 ² x163	692	2 ² x173	732	2 ² x3x61	772	2 ² x193
613	Prime	653	Prime	693	3 ² x7x11	733	Prime	773	Prime
614	2x307	654	2x3x109	694	2x347	734	2x367	774	2x3 ² x43
615	3x5x41	655	5x131	695	5x139	735	5x3x7 ²	775	5 ² x31
616	2 ³ x7x11	656	2 ⁴ x41	696	2 ³ x3x29	736	2 ⁵ x23	776	2 ³ x97
617	Prime	657	3 ² x73	697	17x41	737	11x67	777	3x7x37
618	2x3x103	658	2x7x47	698	2x349	738	2x3 ² x41	778	2x389
619	Prime	659	Prime	699	3x233	739	Prime	779	19x41
620	2 ² x5x31	660	2 ² x3x5x11	700	2 ² x5 ² x7	740	2 ² x5x37	780	2 ² x5x39
621	3 ² x69	661	Prime	701	Prime	741	3x13x19	781	11x71
622	2x311	662	2x331	702	2x3 ³ x13	742	2x7x53	782	2x17x23
623	7x89	663	3x13x17	703	19x37	743	Prime	783	3 ³ x29
624	2 ⁴ x3x13	664	2 ³ x83	704	2 ⁶ x11	744	2 ³ x3x31	784	2 ⁴ x7 ²
625	5 ⁴	665	5x7x19	705	3x5x47	745	5x149	785	5x157
626	3x313	666	2x3 ² x37	706	2x353	746	2x373	786	2x3x131
627	3x11x19	667	23x29	707	7x101	747	3 ² x83	787	Prime
628	2 ² x157	668	2 ² x167	708	2 ² x3x59	748	2 ² x11x17	788	2 ² x197
629	17x37	669	3x223	709	Prime	749	7x107	789	3x263
630	2x3 ² x5x7	670	2x5x67	710	2x5x71	750	2x3x5 ³	790	2x5x79
631	Prime	671	11x61	711	3 ² x79	751	Prime	791	7x113
632	2 ³ x79	672	2 ⁵ x3x7	712	2 ³ x89	752	2 ⁴ x47	792	2 ³ x3 ² x11
633	3x211	673	Prime	713	23x31	753	3x251	793	13x61
634	2x317	674	2x337	714	2x3x7x17	754	2x13x29	794	2x397
635	5x127	675	3 ³ x5 ²	715	5x11x13	755	5x151	795	3x5x53
636	2 ² x3x53	676	2 ² x13 ²	716	2 ² x179	756	2 ² x3 ³ x7	796	2 ² x199
637	7 ² x13	677	Prime	717	3x239	757	Prime	797	Prime
638	2x11x29	678	2x3x113	718	2x359	758	2x379	798	2x3x7x19
639	3 ² x71	679	7x97	719	Prime	759	3x11x23	799	17x47
640	2 ⁷ x5	680	2 ³ x5x17	720	2 ⁴ x3 ² x5	760	2 ³ x5x19	800	2 ⁵ x5 ²

Roots of Numbers

#	Roots	#	Roots	#	Roots	#	Roots	#	Roots
801	$3^2 \times 89$	841	29^2	881	Prime	921	3×307	961	31^2
802	2×401	842	2×421	882	$2 \times 3^2 \times 7^2$	922	2×461	962	$2 \times 13 \times 37$
803	11×73	843	3×281	883	Prime	923	13×71	963	$3^2 \times 107$
804	$2^2 \times 3 \times 67$	844	$2^2 \times 211$	884	$2^2 \times 13 \times 17$	924	$2^2 \times 3 \times 7 \times 11$	964	$2^2 \times 241$
805	$5 \times 7 \times 23$	845	5×13^2	885	$3 \times 5 \times 59$	925	$5^2 \times 37$	965	5×193
806	$2 \times 13 \times 31$	846	$2 \times 3^2 \times 47$	886	2×443	926	2×463	966	$2 \times 3 \times 7 \times 23$
807	3×269	847	7×11^2	887	Prime	927	$3^2 \times 103$	967	Prime
808	$2^3 \times 101$	848	$2^4 \times 53$	888	$2^3 \times 3 \times 37$	928	$2^5 \times 29$	968	$2^3 \times 11^2$
809	Prime	849	3×283	889	7×127	929	Prime	969	$3 \times 17 \times 19$
810	$2 \times 3^4 \times 5$	850	$2 \times 5^2 \times 17$	890	$2 \times 5 \times 89$	930	$2 \times 3 \times 5 \times 31$	970	$2 \times 5 \times 97$
811	Prime	851	23×37	891	$3^4 \times 11$	931	$7^2 \times 19$	971	Prime
812	$2^2 \times 7 \times 29$	852	$2^2 \times 3 \times 71$	892	$2^2 \times 223$	932	$2^2 \times 233$	972	$2^2 \times 3^5$
813	3×271	853	Prime	893	19×47	933	3×311	973	7×139
814	$2 \times 11 \times 37$	854	$2 \times 7 \times 61$	894	$2 \times 3 \times 149$	934	2×467	974	2×487
815	5×163	855	$3^2 \times 5 \times 19$	895	5×179	935	$5 \times 11 \times 17$	975	$5^2 \times 39$
816	$2^4 \times 51$	856	$2^3 \times 107$	896	$2^7 \times 7$	936	$2^3 \times 3^2 \times 13$	976	$2^4 \times 61$
817	19×43	857	Prime	897	$3 \times 13 \times 23$	937	Prime	977	Prime
818	2×409	858	$2 \times 3 \times 11 \times 13$	898	2×449	938	$2 \times 7 \times 67$	978	$2 \times 3 \times 163$
819	$3^2 \times 7 \times 13$	859	Prime	899	29×31	939	3×313	979	11×89
820	$2^2 \times 5 \times 41$	860	$2^2 \times 5 \times 43$	900	$2^2 \times 3^2 \times 5^2$	940	$2^2 \times 5 \times 47$	980	$2^2 \times 5 \times 7^2$
821	Prime	861	$3 \times 7 \times 41$	901	17×53	941	Prime	981	$3^2 \times 109$
822	$2 \times 3 \times 137$	862	2×431	902	$2 \times 11 \times 41$	942	$2 \times 3 \times 157$	982	2×491
823	Prime	863	Prime	903	$3 \times 7 \times 43$	943	23×41	983	Prime
824	$2^3 \times 103$	864	$2^5 \times 3^3$	904	$2^3 \times 113$	944	$2^4 \times 59$	984	$2^3 \times 3 \times 41$
825	$3 \times 5^2 \times 11$	865	5×173	905	5×181	945	$3^3 \times 5 \times 7$	985	5×197
826	$2 \times 7 \times 59$	866	2×433	906	$2 \times 3 \times 151$	946	$2 \times 11 \times 43$	986	$2 \times 17 \times 29$
827	Prime	867	3×17^2	907	Prime	947	Prime	987	$3 \times 7 \times 47$
828	$2^2 \times 3^2 \times 23$	868	$2^2 \times 7 \times 31$	908	$2^2 \times 227$	948	$2^2 \times 3 \times 79$	988	$2^2 \times 13 \times 19$
829	Prime	869	11×79	909	$3^2 \times 101$	949	13×73	989	23×43
830	$2 \times 5 \times 83$	870	$2 \times 3 \times 5 \times 29$	910	$2 \times 5 \times 7 \times 13$	950	$2 \times 5^2 \times 19$	990	$2 \times 3^2 \times 5 \times 11$
831	3×277	871	13×67	911	Prime	951	3×317	991	Prime
832	$2^6 \times 13$	872	$2^3 \times 109$	912	$2^4 \times 57$	952	$2^3 \times 7 \times 17$	992	$2^5 \times 31$
833	$7^2 \times 17$	873	3×291	913	11×83	953	Prime	993	3×331
834	$2 \times 3 \times 139$	874	$2 \times 19 \times 23$	914	2×457	954	$2 \times 3^2 \times 53$	994	$2 \times 7 \times 71$
835	5×167	875	$5^3 \times 7$	915	$3 \times 5 \times 61$	955	5×191	995	5×199
836	$2^2 \times 11 \times 19$	876	$2^2 \times 3 \times 73$	916	$2^2 \times 229$	956	$2^2 \times 239$	996	$2^2 \times 3 \times 83$
837	$3^3 \times 31$	877	Prime	917	7×131	957	$3 \times 11 \times 29$	997	Prime
838	2×419	878	2×439	918	$2 \times 3^3 \times 17$	958	2×479	998	2×499
839	Prime	879	3×293	919	Prime	959	7×137	999	$3^3 \times 37$
840	$2^3 \times 3 \times 5 \times 7$	880	$2^4 \times 5 \times 11$	920	$2^3 \times 5 \times 23$	960	$2^6 \times 3 \times 5$	1000	$2^3 \times 5^3$

Appendix 5

Prime Numbers From 1 to 5,000

<i>Prime Numbers From 1 – 2,521</i>								
2	181	431	683	977	1,277	1,567	1,877	2,207
3	191	433	691	983	1,279	1,571	1,879	2,213
5	193	439	701	991	1,283	1,579	1,889	2,221
7	197	443	709	997	1,289	1,583	1,901	2,237
11	199	449	719	1,009	1,291	1,597	1,907	2,239
13	211	457	727	1,013	1,297	1,601	1,913	2,243
17	223	461	733	1,019	1,301	1,607	1,931	2,251
19	227	463	739	1,021	1,303	1,609	1,933	2,267
23	229	467	743	1,031	1,307	1,613	1,949	2,269
29	233	479	751	1,033	1,319	1,619	1,951	2,273
31	239	487	757	1,039	1,321	1,621	1,973	2,281
37	241	491	761	1,049	1,327	1,627	1,979	2,287
41	251	499	769	1,051	1,361	1,637	1,987	2,293
43	257	503	773	1,061	1,367	1,657	1,993	2,297
47	263	509	787	1,063	1,373	1,663	1,997	2,309
53	269	521	797	1,069	1,381	1,667	1,999	2,311
59	271	523	809	1,087	1,399	1,669	2,003	2,333
61	277	541	811	1,091	1,409	1,693	2,011	2,339
67	281	547	821	1,093	1,423	1,697	2,017	2,341
71	283	557	823	1,097	1,427	1,699	2,027	2,347
73	293	563	827	1,103	1,429	1,709	2,029	2,351
79	307	569	829	1,109	1,433	1,721	2,039	2,357
83	311	571	839	1,117	1,439	1,723	2,053	2,371
89	313	577	853	1,123	1,447	1,733	2,063	2,377
97	317	587	857	1,129	1,451	1,741	2,069	2,381
101	331	593	859	1,151	1,453	1,747	2,081	2,383
103	337	599	863	1,153	1,459	1,753	2,083	2,389
107	347	601	877	1,163	1,471	1,759	2,087	2,393
109	349	607	881	1,171	1,481	1,777	2,089	2,399
113	353	613	883	1,181	1,483	1,783	2,099	2,411
127	359	617	887	1,187	1,487	1,787	2,111	2,417
131	367	619	907	1,193	1,489	1,789	2,113	2,423
137	373	631	911	1,201	1,493	1,801	2,129	2,437
139	379	641	919	1,213	1,499	1,811	2,131	2,441
149	383	643	929	1,217	1,511	1,823	2,137	2,447
151	389	647	937	1,223	1,523	1,831	2,141	2,459
157	397	653	941	1,229	1,531	1,847	2,143	2,467
163	401	659	947	1,231	1,543	1,861	2,153	2,473
167	409	661	953	1,237	1,549	1,867	2,161	2,477
173	419	673	967	1,249	1,553	1,871	2,179	2,503
179	421	677	971	1,259	1,559	1,873	2,203	2,521

Prime Numbers From 1 – 4,999							
2,531	2,833	3,191	3,529	3,851	4,201	4,547	4,919
2,539	2,837	3,203	3,533	3,853	4,211	4,549	4,931
2,543	2,843	3,209	3,539	3,863	4,217	4,561	4,933
2,549	2,851	3,217	3,541	3,877	4,219	4,567	4,937
2,551	2,857	3,221	3,547	3,881	4,229	4,583	4,943
2,557	2,861	3,229	3,557	3,889	4,231	4,591	4,951
2,579	2,879	3,251	3,559	3,907	4,241	4,597	4,957
2,591	2,887	3,253	3,571	3,911	4,243	4,603	4,967
2,593	2,897	3,257	3,581	3,917	4,253	4,621	4,969
2,609	2,903	3,259	3,583	3,919	4,259	4,637	4,973
2,617	2,909	3,271	3,593	3,923	4,261	4,639	4,987
2,621	2,917	3,299	3,607	3,929	4,271	4,643	4,993
2,633	2,927	3,301	3,613	3,931	4,273	4,649	4,999
2,647	2,939	3,307	3,617	3,943	4,283	4,651	
2,657	2,953	3,313	3,623	3,947	4,289	4,657	
2,659	2,957	3,319	3,631	3,967	4,297	4,663	
2,663	2,963	3,323	3,637	3,989	4,327	4,673	
2,671	2,969	3,329	3,643	4,001	4,337	4,679	
2,677	2,971	3,331	3,659	4,003	4,339	4,691	
2,683	2,999	3,343	3,671	4,007	4,349	4,703	
2,687	3,001	3,347	3,673	4,013	4,357	4,721	
2,689	3,011	3,359	3,677	4,019	4,363	4,723	
2,693	3,019	3,361	3,691	4,021	4,373	4,729	
2,699	3,023	3,371	3,697	4,027	4,391	4,733	
2,707	3,037	3,373	3,701	4,049	4,397	4,751	
2,711	3,041	3,389	3,709	4,051	4,409	4,759	
2,713	3,049	3,391	3,719	4,057	4,421	4,783	
2,719	3,061	3,407	3,727	4,073	4,423	4,787	
2,729	3,067	3,413	3,733	4,079	4,441	4,789	
2,731	3,079	3,433	3,739	4,091	4,47	4,793	
2,741	3,083	3,449	3,761	4,093	4,451	4,799	
2,749	3,089	3,457	3,767	4,099	4,457	4,801	
2,753	3,109	3,461	3,769	4,111	4,463	4,813	
2,767	3,119	3,463	3,779	4,127	4,481	4,817	
2,777	3,121	3,467	3,793	4,129	4,483	4,831	
2,789	3,137	3,469	3,797	4,133	4,493	4,861	
2,791	3,163	3,491	3,803	4,139	4,507	4,871	
2,797	3,167	3,499	3,821	4,153	4,513	4,877	
2,801	3,169	3,511	3,823	4,157	4,517	4,889	
2,803	3,181	3,517	3,833	4,159	4,519	4,903	
2,819	3,187	3,527	3,847	4,177	4,523	4,909	

Appendix 6

Perfect Numbers

The study of perfect numbers is ancient. The first recorded instance of their study was by Pythagoras and his followers. Their interest was in their mystical properties.

A perfect number is a number that is the sum of its divisors. An divisor was called an 'aliquot parts' of a number by the ancients. For example the aliquot parts of 10 are 1, 2 and 5. Note that $1 = 10/10$; $2 = 10/5$; and $5 = 10/2$. 10 is not an aliquot part of 10 since it is not a proper quotient (The number obtained by dividing one quantity by another), that is, a quotient different from the number itself.

The four perfect numbers 6, 28, 496 and 8128 were known from ancient times. There is no record of these discoveries. There are:

$$6 = 1 + 2 + 3,$$

$$28 = 1 + 2 + 4 + 7 + 14,$$

$$496 = 1 + 2 + 4 + 8 + 16 + 31 + 62 + 124 + 248$$

$$8128 = 1 + 2 + 4 + 8 + 16 + 32 + 64 + 127 + 254 + 508 + 1016 + 2032 + 4064$$

The first recorded mathematical result concerning perfect numbers which is known occurs in Proposition 36 of Book IX of Euclid's *Elements* written around 300BC.

Simply stated if $1 + 2 + 4 = 7$ which is prime. Then (the sum) \times (the last) $= 7 \times 4 = 28$, which is a perfect number. Also, $1 + 2 + 4 + 8 + 16 = 31$ which is prime. Then $31 \times 16 = 496$ is a perfect number.

If we restate Euclid's rigorous proof in modern form:

$$\text{If } 1 + 2 + 4 + \dots + 2^{n-1} = 2^n - 1.$$

Then: If, for some $n > 1$, $2^n - 1$ is prime then $2^{n-1}(2^n - 1)$ is a perfect number.

However, this did not stand the test of time, it was discovered later that if a number was of this form, it may be a candidate to be a perfect number but not always.

Please note that prime numbers of the form $2^n - 1$ are called Mersenne Primes after Marin Mersenne, a French priest.

The next significant study of perfect numbers was made by Nicomachus of Gerasa. Around 100 AD Nicomachus wrote *Introductio Arithmetica* which gives a classification of numbers based on the concept of perfect numbers. Nicomachus divides numbers into three classes, the superabundant numbers (the sum of the divisors [aliquot parts] is greater than the number), deficient numbers (the sum of the aliquot parts is less than the number), and perfect numbers (that the sum of their aliquot parts is equal to the number). He states:

Among simple even numbers, some are superabundant, others are deficient: these two classes are as two extremes opposed to one another; as for those that occupy the middle position between the two, they are said to be perfect. And those which are said to be opposite to each other, the superabundant and the deficient, are divided in their condition, which is inequality, into the too much and the too little.

Note the moral terms that Nicomachus describes these three sets of numbers:

In the case of the too much, is produced excess, superfluity, exaggerations and abuse; in the case of too little, is produced wanting, defaults, privations and insufficiencies. And in the case of those that are found between the too much and the too little, that is in equality, is produced virtue, just measure, propriety, beauty and things of that sort - of which the most exemplary form is that type of number which is called perfect.

Perfect numbers had a religious significance, namely that 6 is the number of days taken by God to create the world. It is said that God choose this number because it was perfect, and the next perfect number is 28, the number of days it takes the Moon to travel round the Earth. Saint Augustine (354-430) writes in *The City of God* :-

Six is a number perfect in itself, and not because God created all things in six days; rather, the converse is true. God created all things in six days because the number is perfect...

Nicomachus goes on to describe certain results concerning perfect numbers. I will list the those that stood the test of time are:

1. All perfect numbers are even.
2. All perfect numbers end in 6 and 8.
3. There are infinitely many perfect numbers.

The next step forward came in 1603 when Cataldi was able to show that $2^{17} - 1$ and $2^{19} - 1$ are prime and therefore derived the 6th and 7th perfect numbers (see table below).

In 1732 Euler found the 8th perfect number (the first in 125 years). He also proved that every even perfect number must be of the form $2^{p-1}(2^p - 1)$. And that every even perfect number must end in either 6 or 8. Euler also tried to make some headway on the problem of whether odd perfect numbers existed.

As of 2003, 39 perfect numbers are known. It is not know if there are any odd perfect numbers. It has been shown that there are no odd perfect numbers in the interval from 1 to 10^{50} .

List of Perfect numbers base on Euler's formula: $2^{n-1}(2^n - 1)$					
	Perfect Number	Value of "n"	Formula	Date Discovered	"Discoverer"
1	6	2	$2^1(2^2-1)$	Ancient ¹	Unknown
2	28	3	$2^2(2^3-1)$	Ancient ¹	Unknown
3	496	5	$2^4(2^5-1)$	Ancient ¹	Unknown
4	8128	7	$2^6(2^7-1)$	Ancient ¹	Unknown
5	33550336	13	$2^{12}(2^{13} - 1)$	1536	Hudalrichus Regius
6	8589869056	17	$2^{16}(2^{17} - 1)$	1555, 1603	J Scheybl, Cataldi
7	137438691328	19	$2^{18}(2^{19} - 1)$	1603	Cataldi
8	2305843008139952128	31	$2^{30}(2^{31} - 1)$	1723	Euler
9	2658455991569831744654692615953842176	61	$2^{60}(2^{61} - 1)$	1883	Pervusin, Seelhoff

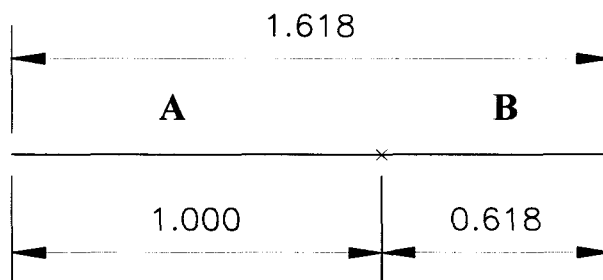
Appendix 7

The Divine Proportion

The Divine Proportion is also called the Golden Mean, Golden Section, Golden Cut or extreme and mean proportion.

One unique point exists that divides a line into two unequal segments so that the whole is to the greater as the greater is to the lesser.

Consider the line segment $A + B$. If we divide it in just the right spot we find that the length of the entire segment ($A + B$) is to the length of the segment A as the length of segment A is to the length of segment B . If we calculate these ratios, we see that we get an approximation of the Golden Ratio.



$$\frac{A+B}{A} = 1.618$$

$$\frac{A}{B} = 1.618$$

Please note that 1.618 is only an approximation of the golden ratio. The Golden Ratio is an irrational number. An irrational number has no *exact* decimal equivalent, although 1.618 is good approximation. In mathematics the Golden Ratio number is called *Phi* (ϕ). For the sake of convenience I will use the term *Phi* (ϕ) exclusively.

Phi has many unique properties. IT IS THE ONLY NUMBER, WHICH, WHEN, SUBTRACTED FROM ONE (1), BECOMES ITS OWN RECIPROCAL.

$$\phi - 1 = 1/\phi$$

$$\text{or } \phi^2 - \phi - 1 = 0$$

When solving this equation we find that the roots are

$$\phi = \frac{1 + \sqrt{5}}{2} \sim 1.618... \quad \text{or} \quad \phi = \frac{1 - \sqrt{5}}{2} \sim -0.618... \quad [\sim \text{means approximately equal to}]$$

If we define $1/\phi$ as ϕ' we have the interesting solutions (to those math heads)

$$\phi + \phi' = 1 \quad \text{and} \quad \phi\phi' = -1.$$

What does this mean? *Phi* is the only number added to itself is ONE and the only number multiplied by itself is negative ONE.

One more point and I will stop talking a foreign language.

Leonardo Fibonacci posed the following problem in his book, *Liber Abaci*: How many pairs of rabbits will be produced in a year, beginning with a single pair, if in every month each pair bears a new pair which becomes productive from the second month on?

To make at long story short, the solution is 1, 1, 2, 3, 5, 8, 13, 21... Take the number 1 in the series. Add to it the previous number 0, and you get the next number in the series (1). Then take the previous number 1 plus the current number (1) and you get the next number (2). Then the previous number (1) plus the current number (2) is equal to three (3). This is how you derive this series. To describe this in terms of math we have:

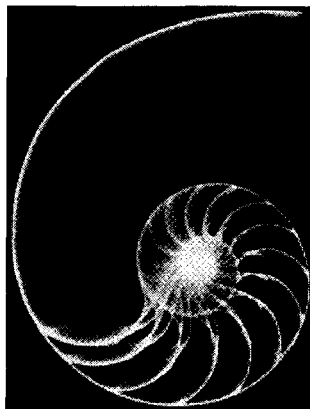
$$U_{(n+1)} = U_n + U_{(n-1)}$$

This is called the Fibonacci series. Constructing the following table we see that the ratio of these numbers approaches the irrational number *Phi* (ϕ). The Fibonacci series approximates *Phi* (ϕ).

1/1	=	1
2/1	=	2
3/2	=	1.5
5/3	=	1.66
8/5	=	1.6
13/8	=	1.62
21/13	=	1.615

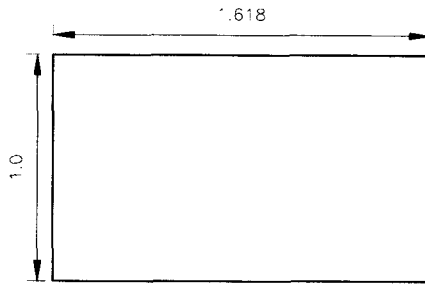
As the series continues this ratio approaches the number *Phi* (ϕ).

The number *Phi* (ϕ) and its approximation, the Fibonacci series, is the pattern of life. Organisms (whether plants, humans and solar systems) organize their structures in relation to the number *Phi* (ϕ). The most well known is the Nautilus shell.

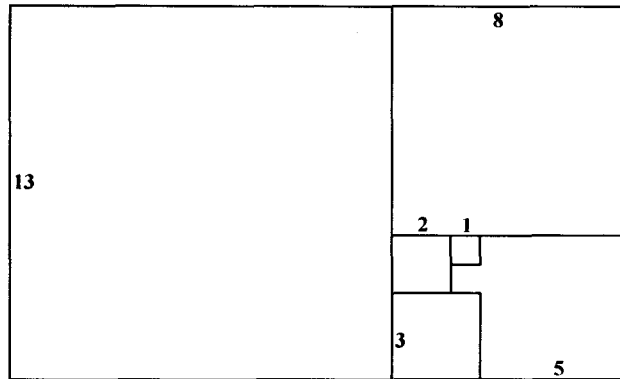


We can generate an approximation of the Nautilus shell by using another figure. A rectangle constructed from the *Phi* (ϕ) ratio. It is called the Golden Rectangle. This particular rectangle has sides A and B that are in proportion to the Golden Ratio. It has been said that the Golden Rectangle is the most pleasing rectangle to the eye. If fact, it is said that any geometrical shape

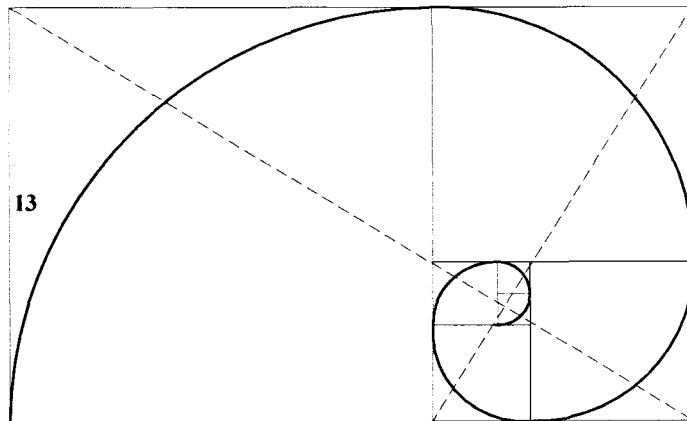
that has the Golden Ratio in it is the most pleasing to look at of those types of figures.



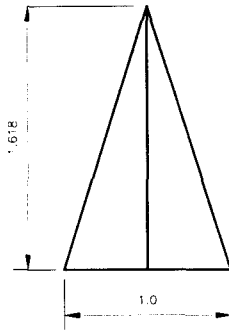
If we take the Fibonacci series and construct a series of rectangles we get the following shape.



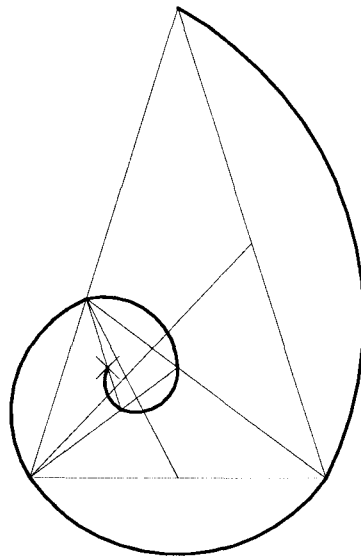
By connecting the points, we can generate a shape that APPROXIMATES the Logarithmic spiral, or Nautilus shell.



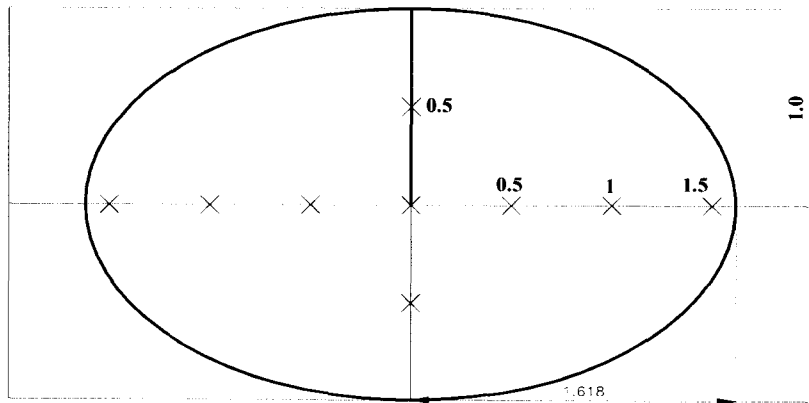
Another shape that is generated is called the Golden Triangle.



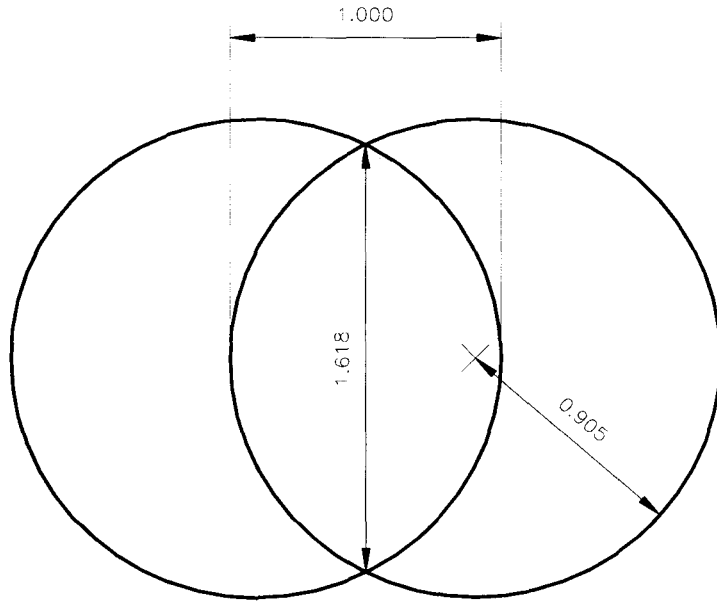
It can also generate an approximation to the Logarithmic spiral by dividing the line segments by 0.618.



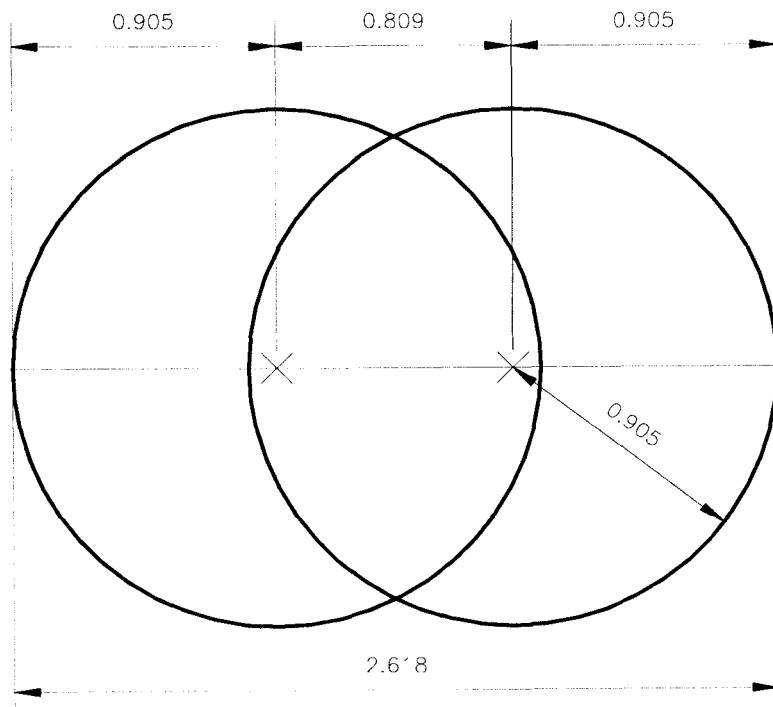
And the Golden Ellipse:



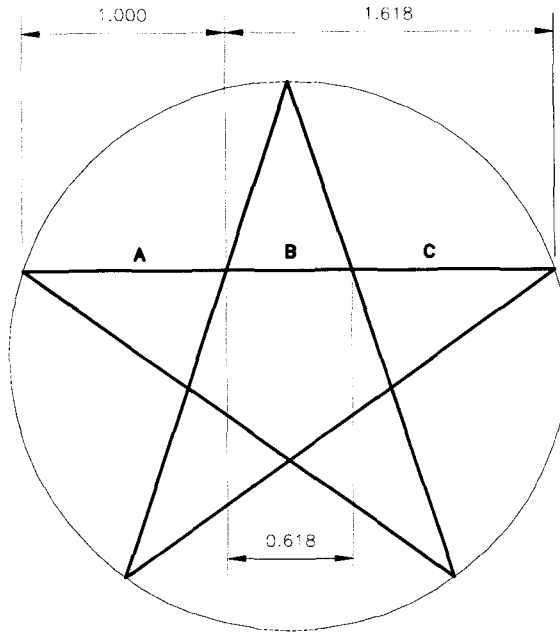
The Golden Vesica Pisces



To construct this figure use these dimensions.



The Golden Mean of the Pentagon



Draw a pentagram with the line segment $A = 1$.

Then line segment $B + C = 1.618 (\phi)$. Line segment $B = 0.618 (1/\phi)$.

What does this all mean? Many of life patterns are built from this shape from the growth pattern of plants to the bones of a human body are built on this pattern. It is a pattern of beauty. It is the pattern of existence. It is a symbol for Life.

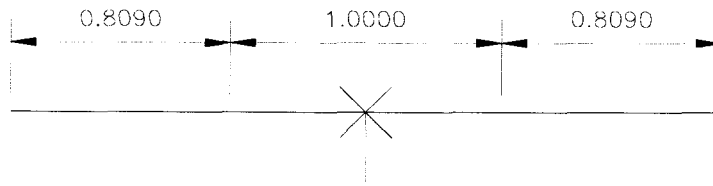
						Properties	
1.1.2	=	א	א	ב	=	4	
1.2.3	=	א	ב	ג	=	6	$\Sigma 3 = 6$ The first perfect number
2.3.5	=	ב	ג	ו	=	10	$\Sigma 4 = 10$
3.5.8	=	ג	ו	ח	=	16	358 is Nachash & Messiah.
5.8.13 ¹ (584)	=	ו	ח	ט	=	64	

¹ Key 13, Death is associated with Nun (נ).

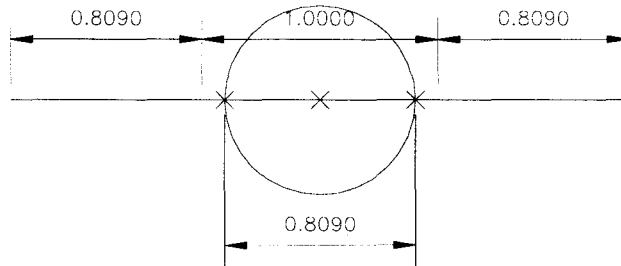
In the language of gematria we can see the pattern of life in the pattern of numbers in the Hebrew letters. The interested student could look up these numbers, research correlations, etc. Good hunting.

How to Draw a Phi Ratio Vesica Pisces.

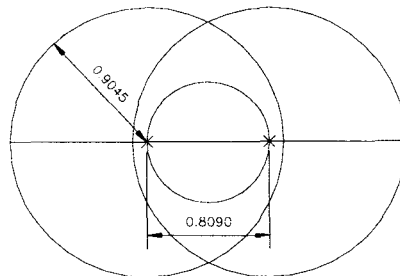
Draw a line with the lengths shown ($\phi/4 = 0.809$).



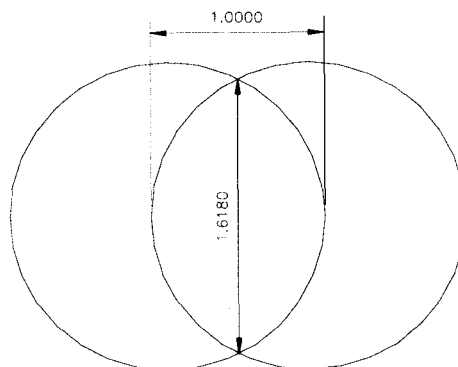
From the center shown draw a circle with diameter Phi/4 (0.045).



From these two end points draw circles shown.



This figure draws a Vesica Pisces that is very close to the phi ratio.



Appendix 8

Introduction to Magic Squares

A magic square is an arrangement of the numbers from 1 to n^2 in an $n \times n$ matrix, with each number occurring exactly once, and have the following properties:

1. Every row adds up to the same number
2. Every column adds up to that same number
3. Both diagonals add up to that number

The simplest magic square is the **1x1** magic square whose only entry is the number **1**.

1

The next simplest is the **3x3** magic square (There are no 2 by 2 magic squares).

4	3	8
9	5	1
2	7	6

The sum all the numbers in a magic square is also called the *Theosophic Extension*. In calculus this property is called a *summation* and is represented by the Greek Letter Epsilon (Σ).

In a 3 by 3 magic square there are 9 cells. The theosophic extension can be represented as:

$$\text{Theosophic Extension} = \Sigma 9 = 1+2+3+4+5+6+7+8+9 = 45.$$

For larger order magic squares this can be a combersom to add up all the numbers. The following formula describes a quick method for determing the *Theosophic Extension* or *Summation* of a magic square:

$$n(n+1)/2 \quad \text{Where } n = \text{the number of cells}$$

In the above example of a 3 by 3 square $n = 9$, so the equation is:

$$9(9+1)/2 = 9(10)/2 = 45$$

For a 11 by 11 square the formula is:

$$121(121 + 1)/2 = 121(122)/2 = 7381.$$

Since each Sephiroth has a corresponding number on the Tree of Life, a magic square is attributed to each Sephiroth based on this number.

Planetary/Sephirah Numbers						
Sephirah/Planet	#	# of cells	sum of any line ¹	Summation of square	Sum of the Perimeter of Square ²	Sum of 4 corner cells
Binah/Saturn	3	9	15	45	40	20
Chesed/Jupiter	4	16	34	136	102	34
Geburah/Mars	5	25	65	325	208	52
Tiphareth/Sun	6	36	111	666	370	74 ²
Netzach/Venus	7	49	175	1,225	600	100
Hod/Mercury	8	64	260	2,080	910	130
Yesod/Moon	9	81	369	3,321	1,312	164
Malkuth ³	10	100	505	5,050	1,818	202
Daath/Pluto	11	121	671	7,381	2,440	244

¹ Horizontal, vertical or diagonal; also called the magic constant

² I found one exception in one Magic Square of The Sun.

³ Traditionally there is no magic square attributed to the sphere of Malkuth. However, a 10 by 10 magic square does exist.

Several examples of magic squares are listed below, they can also be found at the following web sites:

<http://www.pse.che.tohoku.ac.jp/~msuzuki/MagicSquare.html>

<http://www.pse.che.tohoku.ac.jp/~msuzuki/MagicSquare.byMATLAB.html>

Magic Squares of Saturn

4	3	8
9	5	1
2	7	6

Agrippa's Kamea			Hebrew		
4	9	2	ד	ט	נ
3	5	7	ג	ה	ז
8	1	6	ח	א	ו

Magic Squares of Jupiter

Agrippa's Kamea				Hebrew			
4	14	15	1	ד	יד	טו	א
9	7	6	12	ט	ז	ו	ינ
5	11	10	8	ה	יא	י	ח
16	2	3	13	טז	נ	ג	יג

MATLAB Square				Tamori's Square			
16	5	9	4	1	14	15	4
2	11	7	14	8	11	10	5
3	10	6	15	12	7	6	9
13	8	12	1	13	2	3	16

Magic Squares of Mars

Agrippa's Kamea					Agrippa's Kamea in Hebrew				
11	24	7	20	3	יא	כד	ז	כ	ג
4	12	25	8	16	ד	יב	כה	ח	יו
17	5	13	21	9	יז	ה	יג	כא	ט
10	18	1	14	22	י	יח	א	יד	כב
23	6	19	2	15	כג	ו	יט	ב	יה

10	18	1	14	22
11	24	7	20	3
17	5	13	21	9
23	6	19	2	15
4	12	25	8	16

Tamori's Square				
11	10	4	23	17
18	12	6	5	24
25	19	13	7	1
2	21	20	14	8
9	3	22	16	15

Note that the magic constant or sum of any row is equal to 65, which is the sum of two different squares.

$$1^2 + 8^2 = 65;$$

$$4^2 + 7^2 = 65$$

The sum of all the numbers is 325, which is the sum of three different squares.

$$1^2 + 18^2 = 325;$$

$$6^2 + 17^2 = 325;$$

$$10^2 + 15^2 = 325.$$

Magic Squares of the Sun

Agrippa's Kamea						Agrippa's Kamea in Hebrew					
6	32	3	34	35	1	ו	לב	ג	לד	לה	א
7	11	27	28	8	30	ז	יא	כז	כה	ח	ל
19	14	16	15	23	24	יט	יד	יו	יה	כג	כד
18	20	22	21	17	13	יח	כ	כב	כא	יז	יג
25	29	10	9	26	12	כה	כט	י	ט	וכ	יב
36	5	33	4	2	31	לו	ה	לג	ד	ב	לא

Paul Case's Kamea					
3	2	1	36	35	34
31	32	33	4	5	6
15	13	23	19	20	21
22	24	14	18	17	16
12	11	10	27	26	25
28	29	30	7	8	9

6	16	20	11	25	33
28	5	36	9	32	1
35	12	22	13	21	8
15	34	2	29	7	24
10	14	27	18	23	19
17	30	4	31	3	26

6 by 6 MATLAB Square						6 by 6 Tamori's Square					
35	3	31	8	30	4	1	32	3	34	35	6
1	32	9	28	5	36	12	29	9	10	26	25
6	7	2	33	34	29	13	14	22	21	23	18
26	21	22	17	12	13	24	20	16	15	17	19
19	23	27	10	14	18	30	11	28	27	8	7
24	25	20	15	16	11	31	5	33	4	2	36

Magic Squares of Venus

Agrippa's Kamea							Agrippa's Kamea in Hebrew						
22	47	16	41	10	35	4	כ	ז	ט	מ	י	ל	ד
5	23	48	17	42	11	29	ה	כג	מח	זי	מד	יא	כט
30	6	24	49	18	36	12	ל	ו	כד	מט	יט	לו	יב
13	31	7	25	43	19	37	יג	לא	ז	כה	מג	יט	לז
38	14	32	1	26	44	20	לח	יד	לב	א	כו	מד	כ
21	39	8	33	2	27	45	כא	לט	ח	גל	ב	כז	מה
46	15	40	9	34	3	28	מו	שו	מ	ט	לד	ג	כח

7 by 7 Tamori's Square						
22	21	13	5	46	38	30
31	23	15	14	6	47	39
40	32	24	16	8	7	48
49	41	33	25	17	9	1
2	43	42	34	26	18	10
11	3	44	36	35	27	19
20	12	4	45	37	29	28

Please note that the magic constant or summation of a row, column or diagonal is 175, which is equal $1^2 + 7^2 + 5^2$. The sum of all the numbers of the square is $1225 = 35^2$.

Magic Squares of Mercury

Agrippa's Kamea							
8	58	59	5	4	62	63	1
49	15	14	52	53	11	10	56
41	23	22	44	48	19	18	45
32	34	35	29	28	38	39	25
40	26	27	37	36	30	31	33
17	47	46	20	21	43	42	24
9	55	54	12	13	51	50	16
64	2	3	61	60	6	7	57

Agrippa's Kamea in Hebrew							
ח	גט	נט	ה	ד	סב	סג	א
מט	יה	יד	נב	נג	יא	י	נו
מא	כג	כב	מד	מה	יט	יה	מח
לב	לד	לה	כט	כה	לה	לט	מה
מ	כו	כז	לז	לו	ל	לא	לג
יז	מז	מו	כ	כא	מג	מב	כד
ט	נה	נד	יב	יג	נא	נ	יו
סד	ב	ג	סא	ס	ו	ז	נז

8 by 8 MATLAB Square								8 by 8 Tamori's Square							
64	9	17	40	32	41	49	8	1	58	3	60	61	6	63	8
2	55	47	26	34	23	15	58	16	55	14	53	52	11	50	9
3	54	46	27	35	22	14	59	17	42	19	44	45	22	47	24
61	12	20	37	29	44	52	5	32	39	30	37	36	27	34	25
60	13	21	36	28	45	53	4	40	31	38	29	28	35	26	33
6	51	43	30	38	19	11	62	41	18	43	20	21	46	23	48
7	50	42	31	39	18	10	63	56	15	54	13	12	51	10	49
57	16	24	33	25	48	56	1	57	2	59	4	5	62	7	64

Benjamin Franklin's Square							
52	61	4	13	20	29	36	45
14	3	62	51	46	35	30	19
53	60	5	12	21	28	37	44
11	6	59	54	43	38	27	22
55	58	7	10	23	26	39	42
9	8	57	56	41	40	25	24
50	63	2	15	18	31	34	47
16	1	64	49	48	33	32	17

Magic Squares of the Moon

Agrippa's Kamea								
37	78	29	70	21	62	13	54	5
6	38	79	30	71	22	63	14	46
47	7	39	80	31	72	23	55	15
16	48	8	40	81	32	64	24	56
57	17	49	9	41	73	33	65	25
26	58	18	50	1	42	74	34	66
67	27	59	10	51	2	43	75	35
36	68	19	60	11	52	3	44	76
77	28	69	20	61	12	53	4	45

Agrippa's Kamea in Hebrew								
לז	עח	כט	ע	כא	סב	יג	נד	ה
ו	לח	עט	ל	עא	כב	סג	יד	מו
מז	ז	לט	פ	לא	עב	כג	נה	יה
יו	מח	ח	מ	פא	לב	סד	כד	נו
נז	יז	מט	ט	מא	עג	לג	סה	כה
כו	נח	יה	נ	א	מב	עד	לד	סו
סז	כז	נט	י	נא	ב	מג	עה	לה
לו	סח	יט	ס	יא	נב	ג	מד	עו
עז	בח	סט	כ	סא	יב	נג	ד	ה

71	64	69	8	1	6	53	46	51
66	68	70	3	5	7	48	50	52
67	72	65	4	9	2	49	54	47
26	19	24	44	37	42	62	55	60
21	23	25	39	41	43	57	59	61
22	27	20	40	45	38	58	63	56
35	28	33	80	73	78	17	10	15
30	32	34	75	77	79	12	14	16
31	36	29	76	81	74	13	18	11

9 by 9 Tamori's Square								
37	36	26	16	6	77	67	57	47
48	38	28	27	17	7	78	68	58
59	49	39	29	19	18	8	79	69
70	60	50	40	30	20	10	9	80
81	71	61	51	41	31	21	11	1
2	73	72	62	52	42	32	22	12
13	3	74	64	63	53	43	33	23
24	14	4	75	65	55	54	44	34
35	25	15	5	76	66	56	46	45

"Magic Square" of Malkuth

10 by 10 MATLAB Square									
92	98	4	85	86	17	23	79	10	11
99	80	81	87	93	24	5	6	12	18
1	7	88	19	25	76	82	13	94	100
8	14	20	21	2	83	89	95	96	77
15	16	22	3	9	90	91	97	78	84
67	73	54	60	61	42	48	29	35	36
74	55	56	62	68	49	30	31	37	43
51	57	63	69	75	26	32	38	44	50
58	64	70	71	52	33	39	45	46	27
40	41	47	28	34	65	66	72	53	59

10 by 10 Tamori's Square									
1	92	3	94	5	6	97	98	99	10
20	89	18	87	16	15	84	13	82	81
21	72	23	74	25	76	77	28	79	30
40	69	38	67	35	36	64	33	62	61
41	52	43	44	56	55	57	48	59	50
51	42	58	54	46	45	47	53	49	60
70	39	68	37	66	65	34	63	32	31
80	22	73	24	75	26	27	78	29	71
90	19	88	17	86	85	14	83	12	11
91	9	93	7	95	96	4	8	2	100

Magic Square of Daath

56	117	46	107	36	97	26	87	16	77	6
7	57	118	47	108	37	98	27	88	17	67
68	8	58	119	48	109	38	99	28	78	18
19	69	9	59	120	49	110	39	89	29	79
80	20	70	10	60	121	50	100	40	90	30
31	81	21	71	11	61	111	51	101	41	91
92	32	82	22	72	1	62	112	52	102	42
43	93	33	83	12	73	2	63	113	53	103
104	44	94	23	84	13	74	3	64	114	54
55	105	34	95	24	85	14	75	4	65	115
116	45	106	35	96	25	86	15	76	5	66

11 by 11 Tamori's Square										
56	55	43	31	19	7	116	104	92	80	68
69	57	45	44	32	20	8	117	105	93	81
82	70	58	46	34	33	21	9	118	106	94
95	83	71	59	47	35	23	22	10	119	107
108	96	84	72	60	48	36	24	12	11	120
121	109	97	85	73	61	49	37	25	13	1
2	111	110	98	86	74	62	50	38	26	14
15	3	112	100	99	87	75	63	51	39	27
28	16	4	113	101	89	88	76	64	52	40
41	29	17	5	114	102	90	78	77	65	53
54	42	30	18	6	115	103	91	79	67	66

Appendix 9

Gematria of יהוה in the Four Worlds

The Name of Tetragrammaton in each of the Four Worlds ¹						
						Gematria
Qabalistic World	Secret Name	Yod, י	Heh, ה	Vav, ו	Heh, ה	26
Atziloth	עב, <i>Aub</i> (72)	יוד	הי	ויו	הי	72
Briah	סג, <i>Seg</i> (63)	יוד	הי	ואו	הי	63
Yetzirah	מה, <i>Mah</i> (45)	יוד	הא	ואו	הא	45
Assiah	בן, <i>Ben</i> (52)	יוד	הה	וו	הה	52

¹ Derived from page 33 [plate 5] of *Kabbalah Unveiled*

Rosenroth adds on page 32 of Mather's translation:

68. Now, there are four secret names referred to the four worlds of Atziloth, Briah, Yetzirah, and Assiah; and again, the Tetragrammaton is said to go forth written in a certain manner in each of these four worlds. The secret name of Atziloth is *Aub*; that of Briah is *Seg*, that of Yetzirah is *Mah*; and That of Assiah is Ben (meaning son).

69. These names operate together with the Sephiroth through the '231 gates,' as the various combinations of the alphabet are called; but it would take too much space to go fully into the subject here.

Please note by adding the values of the names in the 4 worlds equals 232.

The Four Cabalistic Worlds					
World	Hebrew	#	Meaning	Sephiroth	
Atziluth	אצילות	537	Archetypal Emanation	Kether, Chokmah & Binah	Primum Mobile
Briah	בריאה	218	Creation creative	Chesed, Geburah & Tiphareth	sphere of the Zodiac
Yetzira	יצירה	315	Formative Formation	Netzach, Hod and Yesod	to the planetary chain
Assiah	עשיה	385	Manifestation physical	Malkuth	world of the 4 elements

Appendix 10

The Gematria of the Shem ha-Mephorash

The Shem ha-Mephorash, Schemhamphoras [שם המפרש], or the Divided Name, is derived from the Book of Exodus¹, chapter 14, verses 19, 20, and 21. Each verse is composed of 72 letters (in the original Hebrew). If one writes these three verses' one above the other, the first from right to left, the second from left to right, and the third from right to left (as the ox plows), one would get 72 columns of three-letter names of God. The 72 names are divided into four columns of eighteen names each. Each of the four columns falls under the aegis of one of the letters of the Tetragrammaton, יהוה and the four Cabalistic Worlds.

י	V19	ב	ל	ה	ה	ט	י	ה	ל	א	ה	נ	א	ל	ט	ע	ס	י	ו
	V20	ל	א	ק	ר	ב	ז	ה	א	ל	ז	ה	נ	ל	ה	ל	י	ל	ה
	V21	י	ו	ט	י	ה	ל	ע	ו	ד	י	ת	א	ה	ש	ט	ט	י	ו
		18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
ה	V19	ט	ב	ל	י	ו	ל	א	ר	ש	י	ה	נ	ה	ט	י	נ	ט	ל
	V20	נ	ו	ה	ה	ש	כ	ו	י	א	ר	א	ת	ה	ל	י	ל	ה	ו
	V21	ד	ק	ה	ו	ר	ב	ט	י	ה	ת	א	ה	ו	ה	י	נ	ל	ו
		36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19
ו	V19	נ	נ	ע	ה	ד	ו	ט	ע	ע	ס	ו	ט	ה	י	ר	ה	א	ו
	V20	י	נ	ט	ח	נ	ה	י	ש	ר	א	ל	ו	י	ה	י	ה	ע	נ
	V21	ת	א	ט	ש	י	ו	ה	ל	י	ל	ה	ל	נ	ה	ז	ע	ט	י
		54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37
ה	V19	ט	ה	י	ר	ח	א	ט	ד	ט	ע	י	ו	ט	ה	י	נ	ט	ט
	V20	ו	י	ב	א	ב	י	נ	ט	ח	נ	ה	ט	צ	ר	י	ט	ו	נ
	V21	ט	י	ט	ה	ו	ע	ק	ב	י	ו	ה	נ	ר	ח	ל	ט	י	ה
		72	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55

¹Exodus 14:



(19) And the angel of God, which went before the camp of Israel, removed and went behind them; and the pillar of the cloud went from before their face, and stood behind them.

(20) And it came between the camp of the Egyptians and the camp of Israel; and it was a cloud and darkness to them, but it gave light by night to these: so that the one came not near the other all night.

(21) And Moses stretched out his hand over the sea; and the Lord Caused the sea to go back by a strong east wind all that night, and made thee sea dry land, and the waters were divided.

The Pronunciation of these God names (Mathers style) are as follows:

Heh		Vau		Heh		Yod	
Assiah		Yetzirah		Briah		Atziluth	
55	Mabeh	37	Ani	19	Levo	1	Vehu
56	Poi	38	Chaum	20	Pah	2	Yeli
57	Nemem	39	Rehau	21	Nelak	3	Sit
58	Yeil	40	Yeiz	22	Yiai	4	Aulem
59	Harach	41	Hahah	23	Melah	5	Mahash
60	Metzer	42	Mik	24	Chaho	6	Lelah
61	Vamet	43	Veval	25	Nethah	7	Aka
62	Yehah	44	Yelah	26	Haa	8	Kahath
63	Aunu	45	Sael	27	Yereth	9	Hezi
64	Mechi	46	Auri	28	Shaah	10	Elad
65	Dameb	47	Aushal	29	Riyi	11	Lav
66	Menaq	48	Miah	30	Aum	12	Hahau
67	Aiau	49	Vaho	31	Lekab	13	Yezel
68	Chebo	50	Doni	32	Vesher	14	Mebah
68	Raah	51	Hachash	33	Yecho	15	Heri
70	Yebem	52	Aumem	34	Lehach	16	Haqem
71	Hai ai	53	Nena	35	Keveq	17	Lau
72	Moum	54	Neith	36	Menad	18	Keli

By adding  (Masculine, Severity, Justice aspect of God),  (Feminine, Mercy, aspect), we get the names of the Angels.

Presidency	Choir of Angles	#	God Name	Suffix	Angelic Name	Gematria of God Name	Gematria of Angel Name
,	1 st Choir Seraphim	1	EH	E	Vahaviah	17	32
		2	EH	EH	Yelayiel	50	81
		3	EH	EH	Saitel	79	110
		4	EH	E	Olmiah	140	155
		5	EH	E	Mahashiah	345	360
		6	EH	EH	Lelahel	65	96
		7	EH	E	Akaiah	22	37
		8	EH	EH	Kehethel	425	456
	2 nd Choir Kerubim	9	EH	EH	Haziel	22	53
		10	EH	E	Aldaiah	35	50
		11	EH	E	Laviah	37	52
		12	EH	E	Hihaayah	80	95
		13	EH	EH	Yeyalel	47	78
		14	EH	EH	Mebahael	47	78
		15	EH	EH	Harayel	215	246
		16	EH	E	Hoqamiah	145	160
3 rd Choir Thrones	17	EH	E	Laviah	37	52	
	18	EH	EH	Keliel	60	91	
	19	EH	E	Livohyah	42	57	
	20	EH	E	Pehilyah	115	130	
	21	EH	EH	Nelokhiel	100	131	
	22	EH	EH	Yeyayiel	30	61	
	23	EH	EH	Melohel	75	106	
	24	EH	E	Chahaviah	19	34	
4 th Choir Dominions	25	EH	E	Nithahiah	455	470	
	26	EH	E	Haeyoh	7	22	
	27	EH	EH	Yirthiel	610	641	
	28	EH	E	Sahayoh	306	321	
	29	EH	EH	Reyayel	220	251	
	30	EH	EH	Evamel	47	78	
	31	EH	EH	Lekabel	52	83	
	32	EH	E	Veshiriah	506	521	
5 th Choir Powers	33	EH	E	Yeshavah	24	39	
	34	EH	E	Lehachah	43	58	
	35	EH	E	Kevequiah	126	141	
	36	EH	EH	Mendiel	94	125	

Presidency	Choir of Angles	#	God Name	Suffix	Name	Gematria of God Name	Gematria of Angel Name
1	5 th Choir Powers	37	אניל	אל	Eniel	61	92
		38	חאמיה	אל	Chaamiah	118	133
		39	רעהיאל	אל	Rehaaiel	275	306
		40	יעזיאל	אל	Yeyeziel	27	58
	6 th Choir Virtues	41	ההיאל	אל	Hehihel	15	46
		42	מיקאל	אל	Michael	70	101
		43	וואליאל	אל	Vaveliah	42	57
		44	יאלהיאל	אל	Yelahiah	45	60
		45	סליאל	אל	Saliyah	91	106
		46	אריאל	אל	Aariel	280	311
		47	אסליאל	אל	Aslayah	400	415
		48	מיהל	אל	Mihel	55	86
	7 th Choir Principalities	49	דחואל	אל	Dhooel	17	48
		50	דנעיאל	אל	Deneyel	64	95
		51	החחאכיה	אל	Hechachyah	313	328
		52	אממיה	אל	Aamemiah	150	165
53		ננאל	אל	Nanael	101	132	
54		ניתאל	אל	Nithael	460	491	
55		מבאלה	אל	Mibalaiah	47	62	
56		פאיאל	אל	Payiel	96	127	
2	8 th Choir Archangels	57	נממיה	אל	Nemamiah	130	145
		58	יעלאל	אל	Yeyalel	50	81
		59	הרעאל	אל	Herachiel	213	244
		60	מיצריאל	אל	Mitzreel	330	361
		61	ומוביאל	אל	Vemibael	48	79
		62	יאהל	אל	Yahohel	20	51
		63	אנבאל	אל	Aaneval	126	157
		64	מוקאל	אל	Mockael	58	89
	9 th Choir Angels	65	דמאיה	אל	Demaiah	46	61
		66	מנקל	אל	Menqel	190	221
		67	איהל	אל	Ayael	81	112
		68	חאבויאל	אל	Chabeuyah	16	31
		69	רהאל	אל	Rahael	206	237
		70	יבומאיה	אל	Yebomayah	52	67
		71	האיאל	אל	Hayeyel	25	56
		72	מבמאיה	אל	Mevimayah	86	101

Mathers assigns these the Angels of the decanates and the quinances of the Zodiac *beginning with the sign of Leo*. There are 2 for each 10 degrees (decanates). The Angel in the first 5 degrees (quinance) of the decanate is considered the "day" angel and the last 5 degrees of the "night" Angel. The night angels are shown bold (darker) under the decanate column.

#	Hebrew	Name	Sign	Planet	Minor Arcana	Decanate	Quinance
1	והויה	Vahaviah	♈	☉	5 of W	1	1
2	יליאל	Yelayiel	♈	☉	5 of W	1	2
3	סיתל	Saitel	♈	♃	6 of W	2	3
4	ולמיה	Olmiah	♈	♃	6 of W	2	4
5	מחשיה	Mahashiah	♈	♂	7 of W	3	5
6	ללהל	Lelahel	♈	♂	7 of W	3	6
7	אכיה	Akaiiah	♍	♀	8 of P	1	1
8	קתל	Kethel	♍	♀	8 of P	1	2
9	חזיאל	Hazayel	♍	♃	9 of P	2	3
10	אלדיה	Aldaiah	♍	♃	9 of P	2	4
11	לביה	Laviah	♍	♀	10 of P	3	5
12	חיהייה	Hihaayah	♍	♀	10 of P	3	6
13	יעל	Yeyael	♏	♀	2 of S	1	1
14	מבאהל	Mebahael	♏	♀	2 of S	1	2
15	חריאל	Harayel	♏	♃ & ☽	3 of S	2	3
16	חוקמיה	Hoqamiah	♏	♃ & ☽	3 of S	2	4
17	לביה	Laviah	♏	♀	4 of S	3	5
18	קליאל	Keliel	♏	♀	4 of S	3	6
19	ליוחיה	Livohyah	♐	♀ & ♂	5 of C	1	1
20	פיהליה	Pehilyah	♐	♀ & ♂	5 of C	1	2
21	נלוקיאל	Nelokhiel	♐	♄ & ♃	6 of C	2	3
22	יעיאל	Yeyaiel	♐	♄ & ♃	6 of C	2	4
23	מלוהל	Melohel	♐	♃	7 of C	3	5
24	חחביה	Chahaviah	♐	♃	7 of C	3	6
25	ניחיה	Nithahiah	♑	♃	8 of W	1	1
26	חייח	Haeyoh	♑	♃	8 of W	1	2
27	יריאל	Yirthiel	♑	♂	9 of W	2	3
28	סחייח	Sahayoh	♑	♂	9 of W	2	4
29	רייאל	Reyayel	♑	☉	10 of W	3	5
30	אמל	Evamel	♑	☉	10 of W	3	6
31	לכבל	Lekabel	♒	♃	2 of P	1	1
32	ושיריה	Veshiriah	♒	♃	2 of P	1	2
33	ישבחה	Yeshavah	♒	♀	3 of P	2	3
34	לחחה	Lehachah	♒	♀	3 of P	2	4
35	קבקה	Kevequiah	♒	♀	4 of P	3	5
36	מדיאל	Mendiel	♒	♀	4 of P	3	6

#		Name	Sign	Planetary Ruler	Minor Arcana	Decanate	Quinance
37	אניאל	Eniel	♊	♃ & ☽	5 of S	1	1
38	חעמיה	Chaamiah	♊	♃ & ☽	5 of S	1	2
39	רהעאל	Rehaaiel	♊	♀	6 of S	2	3
40	יזאל	Yeyeziel	♊	♀	6 of S	2	4
41	ההאל	Hehihel	♊	♀	7 of S	3	5
42	מכאל	Michael	♊	♀	7 of S	3	6
43	ווליה	Vaveliah	♋	♃ & ♃	8 of C	1	1
44	יליה	Yelahiah	♋	♃ & ♃	8 of C	1	2
45	סאליה	Saliyah	♋	♃	9 of C	2	3
46	עריאל	Aariel	♋	♃	9 of C	2	4
47	עליה	Aslayah	♋	♀ & ♂	10 of C	3	5
48	מידאל	Mihel	♋	♀ & ♂	10 of C	3	6
49	והאל	Vahoel	♌	♂	2 of W	1	1
50	דניאל	Deneyel	♌	♂	2 of W	1	2
51	החשה	Hechachyah	♌	☉	3 of W	2	3
52	עממיה	Aamemiah	♌	☉	3 of W	2	4
53	ננאל	Nanael	♌	♃	4 of W	3	5
54	ניתאל	Nithael	♌	♃	4 of W	3	6
55	מבלה	Mibalaiah	♍	♀	5 of P	1	1
56	פריאל	Payiel	♍	♀	5 of P	1	2
57	נממיה	Nememiah	♍	♀	6 of P	2	3
58	יזאל	Yeyalel	♍	♀	6 of P	2	4
59	הרחאל	Herachiel	♍	♃	7 of P	3	5
60	מזרעל	Mitzreel	♍	♃	7 of P	3	6
61	ומבאל	Vemibael	♎	♀	8 of S	1	1
62	יהאל	Yahohel	♎	♀	8 of S	1	2
63	ענאל	Aaneval	♎	♀	9 of S	2	3
64	מזאל	Mockael	♎	♀	9 of S	2	4
65	דמניה	Demaiah	♎	♃	10 of S	3	5
66	מנקל	Menqel	♎	♃	10 of S	3	6
67	איעאל	Ayael	♏	☉	2 of C	1	1
68	חבוייה	Chabeuyah	♏	☉	2 of C	1	2
69	רהאל	Rahael	♏	♀ & ♂	3 of C	2	3
70	יבמיה	Yebomayah	♏	♀ & ♂	3 of C	2	4
71	היאל	Hayeyel	♏	♃ & ♃	4 of C	3	5
72	ממיה	Mevimayah	♏	♃ & ♃	4 of C	3	6

Appendix 11

Gematria of the Goetia Demons

Goetia Day Demons in Astrological Order						
#	Hebrew	Gematria	English	Sign	Decanate	Planet
1	באל	33	Bael	♈	1	☉
2	אנאר (אנאראש)	205 (506)	Agares (Agreas)	♈	2	♀
3	ושאנו	316	Vassago	♈	3	♃
4	גמיגין (גאמגין)	116 & 766 (107) & (757)	(Gamigin) Samigina	♉	1	♃
5	מארב (מארבש)	243 (543)	Marbas	♉	2	♀
6	ואלפר (ואלפהר)	317 (322)	Valefor	♉	3	♀
7	אמון	97 & 747	Amon	♊	1	♃
8	ברבטוש	519	Barbatos	♊	2	♀
9	פאימון	187 & 837	Paimon	♊	3	☉
10	בואר	209	Buer	♋	1	♀
11	גוסיון	135 & 785	Gusion	♋	2	♀
12	שיטרי	529	Sitri	♋	3	♃
13	בלאת	433	Beleth (Bileth, Bilet)	♌	1	☉
14	לראיך	261 & 741	Leraje (Leraie, Lerakha)	♌	2	♃
15	אליגוש	350	Eligos	♌	3	♀
16	זאפר	288	Zepar	♍	1	♀
17	בוטיש	327	Botis	♍	2	♂ & ♀
18	באתין	463 & 1,113	Bathin	♍	3	♀
19	שאלוש	637	Sallos (Saleos)	♎	1	♀
20	פורשון	642 & 1,292	Purson	♎	2	☉
21	מאראץ (מאראס)	332 & 1,142 (302)	Marax	♎	3	♂ & ♀
22	יפוש	396	Ipos	♏	1	♂ & ♃
23	אים	51	Aim	♏	2	♀
24	נבר (נבריוש)	252 (568)	Naberius	♏	3	♃

Goetia Day Demons in Astrological Order

#	Hebrew	English	Gematria	Sign	Decanate	Planet
25	גלאסלכול (גלאסיא-לב-ולש)	Glasya-Labolas	162 (473)	♄	1	♂ & ♀
26	בים	Bune (Bime, Bim)	52 & 612	♄	2	♀
27	רינוו (רונוו)	Roneve	272 268	♄	3	♂ & ☽
28	ברית	Berith (Beale, Beal, Bofry, Bolfry)	612	♁	1	♀
29	אשתרות (אשטארות)	Astaroth	1307 (917)	♁	2	♀
30	פורנאש (פהורנאוש)	Forneus	637 (648)	♁	3	☽
31	פּוּרַאש	Foras	587	♊	1	♀
32	אסמודאי (אסמודי)	Asmoday (Asmodai)	122 (121)	♊	2	☉
33	געף (גאאף)	Gaap	153 & 873 (85) & (805)	♊	3	♀ & ♃
34	פורפור (פהורפהור)	Furfur	572 (582)	♃	1	♂
35	מרחוש (מרחושיאש)	Marchosias	554 (865)	♃	2	☽
36	שטלוש (ישטלוש)	Stolos (Istolos)	651 (661)	♃	3	♃

Goetia Night Demons in Astrological Order

#	Hebrew	English	Gematria	Sign	Decanate	Planet
37	פאניץ (פאניס)	Phenex (Pheynix)	221 & 1031 (201)	♈	1	♃
38	האלף (פהורנאוש)	Halphas Malthus, Malthas)	116 & 836 (648)	♈	2	♂
39	מאלף (מאלחש)	Malphas	151 & 871 (771)	♈	3	♀
40	ראום	Raum	247 & 807	♉	1	♂
41	פוכלור (פהורכלור)	Focalar (Forcalor, Furcalor)	324 (547)	♉	2	♀
42	ופאר	Vepar (Vephar)	287	♉	3	♀
43	שבניך (שבנוך)	Sabnock (Savnok)	382 & 862 (378) & (858)	♊	1	♃
44	שץ (שאז)	Shax (Shaz, Shass)	390 & 1,200 (308)	♊	2	♃
45	וינא	Vine (Vinea)	57	♊	3	♃ & ♂
46	ביפרו (ביפהרוניש)	Bifrons (Bifrous, Bifrous)	298 (653)	♋	1	♂
47	אואל (וואל)	Uvall (Vual, Voval)	38 (43)	♋	2	♀
48	העגנת (האגנטי)	Haagenti	528 (78)	♋	3	♀
49	כרוכל	Crocell (Crokell)	276	♌	1	♀
50	פורך (פהרכש)	Furcas	306 & 786 (605)	♌	2	♃
51	בעלם (באלאם)	Balam (Balaam)	142 & 702 (74) & (634)	♌	3	♃
52	אלוך (אלוכאס)	Alloces (Alocas)	57 & 537 (118)	♍	1	♀
53	כאין (כאמיו)	Camio (Caim)	81 & 731 (77)	♍	2	♀
54	מורם (מורמוס)	Murmur (Murmus, Murmux)	286 & 846 (352)	♍	3	♀ & ♂

Goetia Night Demons in Astrological Order						
#	Hebrew	English	Gematria	Sign	Decanate	Planet
55	אוראוב (ורובש)	Orobas	216 (514)	♁	1	♃
56	גמור (גמורי)	Gremory (Gamori)	249 (259)	♁	2	♀
57	ושו	Ose (Oso, Voso)	312	♁	3	♃
58	און (אונש)	Amy (Avnas)	57 & 707 (357)	♃	1	♃
59	וריאץ (וריאס)	Oriax (Orias)	307 (1,117) (277)	♃	2	♃
60	נפול (נפולא)	Vapula (Naphula)	166 (167)	♃	3	♃
61	זאנן (זאנאן)	Zagan	61 & 711 (62) & (712)	♃	1	♁ & ♃
62	ואל (ואלו)	Volac (Valak, Valu, Ualac)	37 (43)	♃	2	♃
63	אנדר (אנדראש)	Andras	255 (556)	♃	3	♃
64	האור (האוראש)	Haures (Hauras, Havres, Flauros)	212 (513)	♃	1	♀
65	אנדראלף (אנדראלפהוש)	Andrealphus	366 & 1,086 (677)	♃	2	♃
66	כימאור (כימאריש)	Cimejes (Cimeies, Kimaris)	277 (581)	♃	3	♃
67	אמדוך (אמדוכיאש)	Amdusias (Amdukias)	71 & 551 (382)	♃	1	♀
68	בליאל	Belial	73	♃	2	♁
69	דכאוראב (דכארביא)	Decarabia	234 (238)	♃	3	♃
70	שאר	Seere (Sear, Seir)	501	♃	1	♃
71	דנתאל (דנתאליון)	Dantalion ¹	485 (551) & (1,201)	♃	2	♀
72	אנדרומאל (אנדרומליוש)	Andromalius	332 (647)	♃	3	♂

¹ Spelled with a ט instead of a ט in Godwin's Cabalistic Encyclopedia. I tend to agree with this spelling.

Appendix 12

Gematria of the Sentinels of the Tunnels of Set

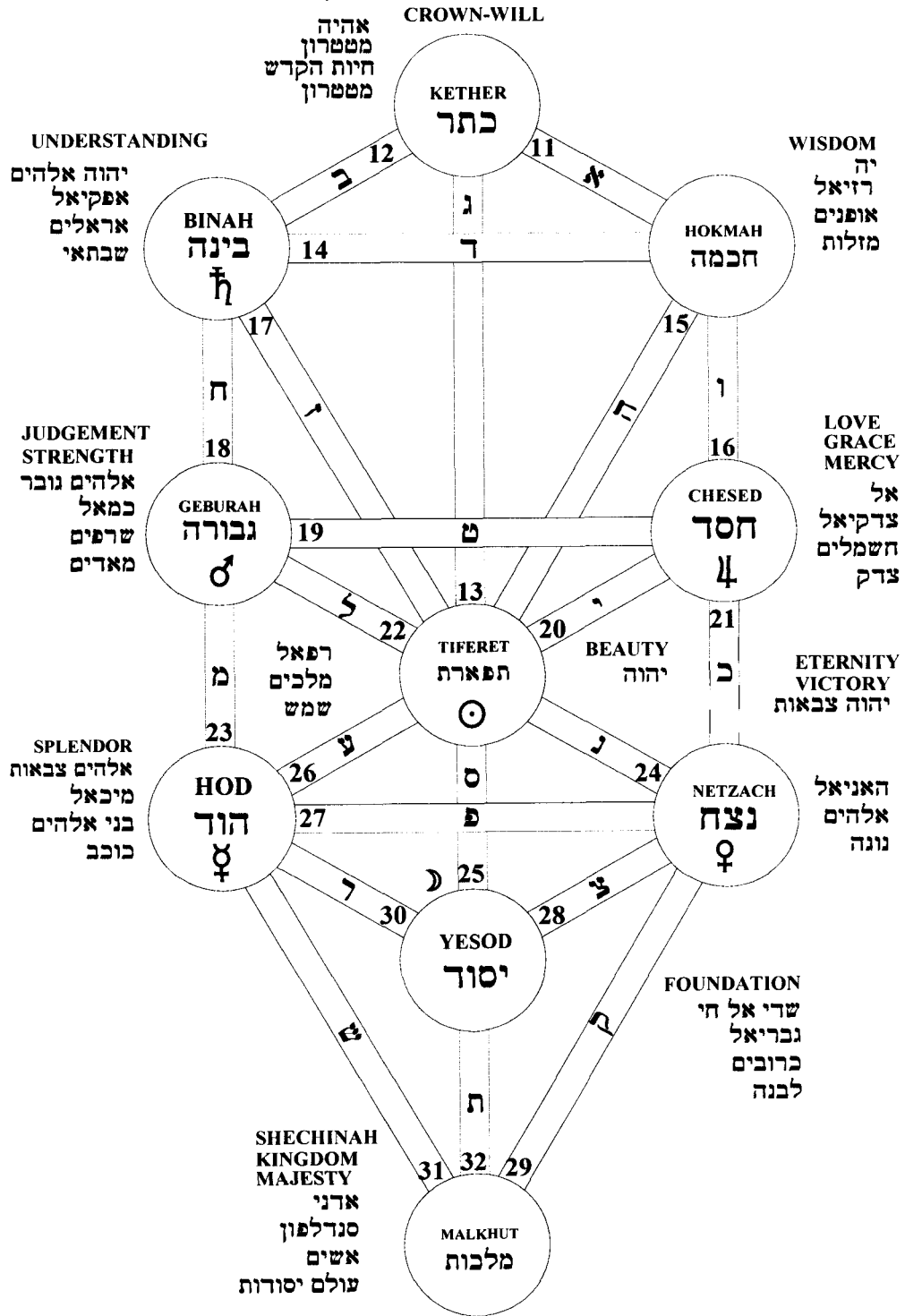
Inhabitants of the Inverse Paths on the Tree of Life				
Tunnel #	Path	Name	Hebrew Name	Gematria
11	א	Amprodias	אמפרודיס	401
12	ב	Baratchial	ברטחאל	260
13	ג	Gargophias	גרנופיאץ	393, 1203
14	ד	Dagdagiell	דגדגאל	55
15	ה	Hemethterith	המתרת	1054
16	ו	Uriens	עריהנס	395
17	ז	Zamradiel	זמרדיאל	292
18	ח	Characith	חאראכית	640
19	ט	Temphioth	טאמפיעת	610
20	י	Yamatu	יאמאטע	131
21	כ	Kurgasiox	כורגסיטז	315
22	ל	Lafkursiox	לפקערציאץ	671, 1481
23	מ	Malkunofat	מאלכונעפאט	307
24	נ	Niantiel	נינטיאל	160
25	ס	Saksaksalim	סכסכסלים	300, 860
26	ע	A'ano'nin	ענואנין	237, 887
27	פ	Parfaxitas	פארפאחיטאס	450
28	צ	Tzuffifu	צופליפו	302
29	ק	Qulielfi	קולילפי	266
30	ר	Raflifu	רפליפו	406
31	ש	Shalicu	שלקע	500
32	ת	Thantifaxath	תאנטיפצת	1040

Spelling of sentinels of the tunnels is taken from Godwin's Cabalistic Encyclopedia.

Appendix 13 - Names Attributed to the Sephiroth

#	Sephiroth	God Name (Atziluth)	Archangel (Briah)	Choir of Angels (Yetzirah)	Planet or Sphere of Activity (Assiah)
1	Kether כתר (620)	Eheih אהיה (21)	Metatron מטטרון (314)	Chayoth ha-Qadesh Holy Living Creatures חיות הקדש (833)	Rashith ha-Gilgalim Beginning of the Whirlings The Prime Mobile ראשית הגלגלים (1032)
2	Chokmah חכמה (73)	IH or IHVH יהוה (15) יה (26)	Raziel רזיאל (248)	Ophanim (Wheels) אופנים (187, 747)	Mazloth (Zodiac) מזלות (483)
3	Binah בינה (67)	IHVH Elohim יהוה אלהים (112)	Tzaphkiel צפקיאל (311)	Aralim (Mighty Ones) אראלים (282, 842)	Shabbathai (Saturn) שבתאי (713)
4	Chesed חסד (72)	Al, El אל (31)	Tzadkiel צדקיאל (235)	Chashmalim Merciful Ones חשמלים (428, 988)	Tzedek (Jupiter) צדק (194)
5	Geburah גבורה (216)	Elohim Gibor אלהים גובר (297, 857)	Kamael כמאל (91)	Seraphim (Flaming Serpents) שרפים (630, 1190)	Madim (Mars) מאדים (95, 655)
6	Tiphareth תפארת (1081)	IHVH Eloah va-Daath יהוה אלוה ודעת (548)	Raphael רפאל (321)	Melekim (Kings) מלכים (700, 140)	Shemesh (The Sun) שמש (640)
7	Netzach נצח (148)	IHVH Tzabaoth יהוה צבאות (525)	Haniel האניאל (97)	Elohim אלהים (86)	Nogah (Venus) נוגה (64)
8	Hod הוד (15)	Alohim Tzabaoth אלהים צבאות (585, 1145)	Michael מיכאל (101)	Beni Elohim בני אלהים (148, 708)	Kokab (Mercury) כוכב (48)
9	Yesod יסוד (80)	Shaddai El Chai שדי אל חי (363)	Gabriel גבריאל (246)	Kerubim (Cherubs) כרובים (278, 838)	Lebanah (The Moon) לבנה (87)
10	Malkuth מלכות (496)	Adonai Ha Aretz אדני הארץ (361, 1171)	Sandalphon סנדלפון (280, 930)	Eshim (Flames) אשם (351, 911)	Olam Yesodoth (World of Foundations) עולם יסודות (632, 1192)
11	Daath דעת (474)	IHVH Elohim יהוה אלהים (112)	Mesukiel מסוכיאל (167)		Esrin עשרים (620)

אור אין סוף



Appendix 14

The 32 Paths of Wisdom Attributions

The thirty-two Paths of Wisdom consist of the ten sephiroth and the twenty-two Tarot keys that connect the paths (see figure). The following table and commentary are derived from Dr. Paul Foster Case's home study course titled *The Thirty-two Paths of Wisdom*.

Path	Tarot Key	Hebrew	Transliterated	English	Gematria
1 st		שכל מופלא (157)	Sekhel Mopla	Admirable or Wonderful Intelligence	507
2 nd		שכל מהדר (262)	Sekhel Mazohir	Illuminating or Radiant Intelligence	608
3 rd		שכל הקדוש (415)	Sekhel Ha Qodesh	Sanctifying Intelligence	765
4 th		שכל קבוע (178)	Sekhel Qavua	Measuring, Arresting or Receptacular Intelligence	528
5 th		שכל נשרש (850)	Sekhel Nesharash	Radical Intelligence	1,200
6 th		שכל שפע נבדל (86) (450)	Sekhel Shepha Nivdal	Intelligence of Separative Influence	886
7 th		שכל נסתר (710)	Sekhel Nisetar	Occult or Hidden Intelligence	1060
8 th		שכל שלום (370 or 930)	Sekhel Shalom	Perfect Intelligence	720 or 1,280
9 th		שכל מהדר (220)	Sekhel Tahur,	Pure Intelligence	570
10 th		שכל מתנוצץ (676 or 1,486)	Sekhel Mitnotzetz	Resplendent Intelligence	1,836 or 2,646
11 th	0	שכל מצמצח (242)	Sekhel Metzochtzoeh	Scintillating or Fiery Intelligence	592
12 th	1	שכל בהיר (217)	Sekhel Bahir	Intelligence of Transparency	567
13 th	2	שכל מנהיג האחדות (424) (108)	Sekhel Menhig ha-Achdoth	Uniting Intelligence	882
14 th	3	שכל מאיר (251)	Sekhel Meir	Luminous Intelligence	601
15 th	4	שכל מעמיד (164)	Sekhel Maamid	Constituting Intelligence	514
16 th	5	שכל נצח (158)	Sekhel Nitzchi	Triumphant or Eternal Intelligence	508
17 th	6	שכל הדרגש (513)	Sekhel ha-Hergesh	Disposing Intelligence	863

Path	Tarot Key	Hebrew	Transliterated	English	Gematria
18 th	7	שכל בית השפע (455) (412)	Sekhel Beth ha-Shepha	Intelligence of the House of Influence	1,217
19 th	8	שכל סוד הפעולות הרוחניות	Sekhel Sod ha-pauloth ha-Ruachnioth	Intelligence of the Secret of all Spiritual Activities	1,702
20 th	9	שכל הרצון (351 or 1001)	Sekhel ha-Ratzon	Intelligence of Will	701 or 1351
21 st	10	שכל החפץ המבוקש	Sekhel ha-Chaphutz ha-Mevupash	Intelligence of Desirous Quest	986 or 1796
22 nd	11	שכל נאמן (141 or 791)	Sekhel Ne'eman	Faithful Intelligence	491 or 1,141
23 rd	12	שכל קיים (160 or 720)	Sekhel Qayyam	Stable Intelligence	510 or 1,070
24 th	13	שכל דמיוני (120)	Sekhel Dimyoni	Imaginative Intelligence	470
25 th	14	שכל ניסוני (186)	Sekhel Nisyoni	Intelligence of Probation or Trial	536
26 th	15	שכל מחדש (358)	Sekhel Mechudash	Renewing Intelligence	708
27 th	16	שכל מרגש (549)	Sekhel Morgash	Exciting or Active Intelligence	899
28 th	17	שכל מוטבע (127)	Sekhel Motba	Natural Intelligence	477
29 th	18	שכל מוגשם (389 or 949)	Sakyel Mughsham	Corporeal Intelligence	739 or 1299
30 th	19	שכל כללי (90)	Sekhel Kelali	Collective Intelligence	440
31 st	20	שכל תמידי (464)	Sekhel Temidi	Perpetual Intelligence	814
32 nd	21	שכל נעבד (126)	Sekhel Ne'evad	Serving, or Administrative Intelligence	476

Appendix 15

The 32 Paths of Wisdom

1st Path is *Sekhel Mopla*

The 1st Path (Kether, the 1st Sefirah) is called the Admirable or Wonderful Intelligence, the Supreme Crown. It is the light of the Primordial Intelligence, and this is the Primary Glory. Among all created beings, none may attain to its essential reality.

Mopla, a variant of פֶּלֶא, *pehleh*, is used in Isaiah 9:6: "For a child will be born to us, a son will be given to us; and the government will rest on His shoulders; and His name will be called Wonderful Counselor, Mighty God, Eternal Father, Prince of Peace [שֵׁר שְׁלוֹם]."

The Wonderful Intelligence is the light of the Primordial Intelligence, a Conscious, Radiant Energy. In whatever world we find it manifest, we are dealing with something which is living, conscious light.

On all planes the Kether [בְּתֵר, 620] point is a contraction of power (כּ), at a point of condensation (ת), which, in relation to the successive stages of manifestation, becomes a point of radiation (ר). It is the primary condensation of the Limitless Light into a point which is a center of whirling, vertical motion.

This is called also the Primary Glory, [בְּנוֹד רֵאשׁוֹן, 589] *kabode rashun*, and the noun *kabode*, though translated as "glory" has for its primary meaning "weight."

The radiating energy projected from Kether is named [מְזֵלָה, 78], *mezla*, meaning "influence." The root of this term is מָזַל, which is the singular form of the noun מְזֵלוֹת, *masloth*, literally, the "wanderers," and meaning the "planets." Thus the force proceeding from the first Sefirah is identified with planetary influences; and remember that planets, like the moon, do not shine by their own light but by reflecting the light of the sun round which they revolve. That sun is the Kether of their World-system.

Mezla is a whirling force, and in its physical expression is the spiraling, electro-magnetic energy which is the substance from which the atoms of the physical universe are constructed.

The real presence of Kether is at the innermost center of human personality. Though this knowledge does not include (and does not need to include) intellectual comprehension of the essential reality of the Life-power, it does include an ever-increasing grasp of the possibilities for bringing to bear the limitless potencies of this real presence, in order to effect transformations in human personality itself, and, through human personality, in human society and the physical conditions of human environment.

2nd Path is *Sekhel Mazohir*

The 2nd Path (Chokmah, the 2nd Sefirah) is called the Illuminating or Radiant Intelligence. It is the Crown of Creation, and the Splendor of Unity, to which it is the most nearly approximate. In the mouths of the Masters of the Qabalah it is called the Second Glory.

The Illuminating suggests radiance. The Light in Chokmah is the reflection of the original light of Kether, it is considered as the source of illumination for everything below it on the Tree of Life. Chokmah is thus often referred to as the Kether of Briah, the Crown of Creation. It is the starting point for the entire creative series from Chokmah to Malkuth.

Chokmah is called the "Splendor of Unity" [וְהַאֲדָרָה הַזֶּה, 439]. Note the plural ending on Unity [וְהַאֲדָרָה] to indicate the general aspect of some thing or quality. Thus the plural form of *Unities*, suggests that unity is not empty and abstract, but a fullness.

The whirling Life and Light force attributed to Chokmah is Chaiah חַיָּה. The Qabalistic conception of life is inseparable from that of consciousness. The order of the heavens is a mental order, and the energy manifested in that order is not only radiant, but also conscious and vital.

From our human point of view, the conscious energy of Chokmah is super-conscious. It is the Life-power's own knowledge of its own nature and powers, transcending every human mental state. In one sense it is the Life-power's awareness of itself prior to the beginning of a cycle of creative activity. Creation is a continual process going on now just as surely as it did millions of years ago.

Chokmah in relation to Kether is to be thought of as the Life-power's eternal awareness of itself; and in this sense Chokmah is said to be feminine. It is the mirror of Kether. It is the universal consciousness, turned inward and upward toward *Yekhidah* [37].

3rd Path is *Sekhel Ha Qodesh*

The 3rd Path (Binah, the 3rd Sephirah) is called the Sanctifying Intelligence. It is the Foundation of Primordial Wisdom, termed Firmness of Faith, and Root of thy Mother. It is the Mother of Faith for the power of Faith emanates from it.

Ha Qodesh is from a root adjective: "to make pure, to set apart, to consecrate". This is the purifying, consecrating aspect of Binah, seat of the Divine Soul, *Neshamah*. The Divine Soul is called The Untouchable Glory of God in Latin. No matter how a humanity may "sin", the Divine Soul is the well-spring that cannot be touched by humanities misinterpretations of reality.

Binah is the field of separative activity whereby the infinite possibilities of the Life-power are made manifest in a multiplicity of finite, specialized forms. Thus the idea of multiplication associated with the number 3 is really connected with subdivision. The One Reality does not lose its unity through the creative process of subdivision or specialization which results in manifold appearances. The cosmic possibility which is behind any class of specific forms is One, however many variations may result from it.

This power of specialization is personal as well as universal. As The Pattern on the Trestleboard says, each of us is *filled* with Understanding, and by that Understanding is guided, moment by moment. Until we reach a certain measure of ripeness, we are not aware of this guidance. We believe ourselves to be autonomous, self-directed beings, gifted with personal free-will.

Careful self-examination will convince you that whatever understanding of these truths you now possess began as an intuitive perception. You didn't manufacture it. It *came* to you from something deeper and higher than your personal intellect. That higher and deeper something is the Sanctifying Intelligence, as made manifest through *Neshamah*, the Divine Soul. This is the *single* Divine Soul that never ceases to be ONE, though its omnipresence makes it dwell simultaneously in all personal souls, incarnate and discerned, human and non-human.

As we begin to experience the truth that we are in touch with something higher, and as we have practical demonstration that our mental patterns do actually take form, we grow in confidence. This is why the 3rd Path is said to be Firmness of Faith, and Mother of Faith. Faith is more than assurance. It is a power which can produce psychological and physiological manifestations. Faith cures ailing bodies and minds. Faith heals diseased circumstances. Faith enables those who have attained to full ripeness, to full expression of the Sanctifying Intelligence, to perform works of power far beyond the accomplishment of average men and women. Every one of these works of power is accomplished as a fulfillment of law; and faith is the

power which makes these works possible.

The 3rd Path is said to be "Root of thy Mother." These words emphasize the idea that Binah is the root of the material basis of every person's experience. Binah is our mother, the great womb of nature, from which we are all born.

It is the universal subconsciousness, having the same qualities, on the universal scale, that we associate with our personal subconscious activity. Our personal subconsciousness is one with the universal (or collective) subconsciousness, as a bay or inlet is continuous with the ocean. Thus Binah is known as the Great Sea, as well as being called, Aima [62], the Mother.

4th Path is *Sekhel Qavua*

The 4th Path (Chesed or Gedulah) is called the Measuring, Arresting or Receptacular Intelligence. It is so called because from thence is the origin of all beneficent power of the subtle emanations of the most abstract essences which emanate one from another by the power of the Primordial Emanation.

These are powers of Chokmah, powers of the universal light-force which is also the life-force of mankind. They are beneficent powers and are symbolized in Key 5, corresponding to the path of Vav, which carries the influence of the Illuminating Intelligence *from* Chokmah *to* Chesed.

These beneficent powers emanate from one another by the power of the Primordial Emanation, which is Kether. The power of Kether is carried from the 1st Sefirah to Chokmah through the Path of Aleph. They are said to be "abstract essences" because they are subdivisions or specializations of the life-force, like waves in an ocean, or currents within it, though not really separate from the whole expanse and depth of the sea.

Chesed is the seat of memory, both cosmic and personal memory. The Life-power's perfect recollection of itself and of its potentialities, as well as of the entire sequence of events in the creative process, is the basis for the continuity of the cosmic order. What we call "laws of nature" are rooted in this cosmic recollection, and the dependability of these laws has its basis in this cosmic memory.

The 4th Path marks the beginning of the differentiation and distribution of special powers. These emanate by the way of "subtlety". This noun signifies "fineness, minuteness". Thus from Chesed emanate an exceedingly fine, corpuscular substance having actual mass and weight. It is projected by those who have entered into full understanding of this 4th Path.

Benevolent thought and speech have actual weight, and set up real movement of actual substance. The blessings which one of the Chasidim showers on those who enter into relation with him are no abstractions. They are projections of real substance.

The 4th Sefirah is said to rise like a boundary, and on this account is called the Arresting Intelligence. Here we have the ideas of specific form, of definite limitation, of the marking out of boundaries. The suggestion is reminds us Binah, the Sphere of Saturn.

The Saturn force is the spiral moving toward a center, and winding up energy. Psychologically this Saturnine influence tends to make one self-contained and self-centered. The Jupiter force is also a spiral, but it moves away from a center, and it diffuses energy.

The psychological influence of Jupiter is centrifugal. It makes one expansive, and manifests as interest in the welfare of others. Thus it corresponds to the fundamental characteristic of the Chasidim. They give freely and abundantly of themselves and of their possessions. They are never self-centered. They enter into the lives of their fellows.

But the 4th Sefirah is called the Measuring Intelligence, to show that although those motivated by its

influence give freely, they also impart their beneficences wisely. Although their generosity is measured, it is never stingy. They know they have access to an inexhaustible supply of whatever may be needed to fill the requirements of the special circumstance with which they may have to deal.

The way to keep in contact with Eternal Supply is to act as if you were perfectly sure of it. To give freely of your time, your knowledge, your interest, your possessions. Freely, yet not wasteful. To give as intelligently as you can, where the gift fills a real need. To let go of whatever you have given, leaving the recipient of your benevolence to use the gift as he sees fit. He who learns this fine art becomes one of the Chasidim, having free access to the limitless treasure of Eternal Supply.

5th Path is *Sekhel Nesharash*

The 5th Path (Pachad, Geburah or Deen, the 5th Sefirah) is called the Radical Intelligence. It is so called because it is the very substance of Unity, and is within the substance of that Binah which itself emanates from within the depths (literally, "from within the enclosure") of the Primordial Wisdom.

The first 3 letters of *nesharash* spell נִשָּׂר *nasher*, eagle and the last 3 שָׂרָשׁ, *sharash*, a root. Therefore, the Radical Intelligence is the "Root of the Eagle." The eagle stands for Scorpio, Key 13. The letter Shin (Pluto), co-rules Scorpio. Study these Keys together and you can see that the conscious immortality symbolized by Key 20 is a direct consequence of the direction of the force which is the active principle symbolized by Key 13. This force is closely connected with the feeling of personal will.

The cosmic life-force, seated in Chokmah, is the immediate source of the feeling of "personal will." Our feeling of willpower is due to tensions set up in our bodies as the cosmic life-force plays through them. All personal activity is due to various types of resistance which the human organism offers to the flow of the life-force. Our bodies (physical bodies and finer bodies) perform their various functions because they are so arranged that they offer specific types of resistance to the flow of the current of the Life-power.

The Radical Intelligence is the "very substance of Unity." Unity here means Kether. It the force of the 5th Path is the same *Mezla*, the primary whirling motion concentrated in Kether. This one Conscious Energy is the substance of all things.

The Radical Intelligence is said to be within the substance of Binah, to bring out the truth that the ten Sephiroth are not separate entities but rather 10 ways in which the human mind conceives a single reality.

The substance of Binah, within which the Radical Intelligence is enclosed, itself emanates from within the depths of the Primordial Wisdom. This shows that what we are concerned with in the 5th Path is the life force, *Chaiah*, which has its seat in Chokmah. In Geburah the life-force is specialized as Mars which is the basis of our feeling of will-power.

6th Path is *Sekhel Shepha Nivdal*

The 6th Path (Tiphareth) is called the Intelligence of Separative Influence. It is so called because it gathers together the emanations of the archetypal influence and communicates them to all those blessed ones who are united to its essence.

Mediating or Separative is from a root, *nivdal* נִבְדַּל, meaning: to be divided, separated, set apart; similar to the English "to distinguish". The Separative Intelligence is a mode of consciousness which acts in man as the discriminative power that classifies various objects of experience. In the plane of creative thinking, this discriminative quality of the Ego is the power which classifies various objects of thought and imagination. In Briah, the image-generating faculty of Tiphareth within us gives shape and diversity to the archetypal principles flowing into our field of awareness from above. To make this image-generating,

transforming power work toward our further growth and illumination, we must act intentionally and consciously as transmitters of power which descends from above.

Thus the name for Tiphareth is "The Intelligence of Separated Influence," or "Intelligence of Parted or *Allotted* Outflow," or "Intelligence of Mediating Influence." All 3 names for this path are derived from the central position of Tiphareth, and from the fact that it collects at one point the descending powers from above, and from that same point distributes those powers through the channels which are below.

Tiphareth is like a reservoir into which are poured the influences of the five Sephiroth above it, and from which flow, by way of the paths of the letters Nun, Samekh and Ayin, the influences active in man's desire nature, man's intellect, and the Vital Soul which man shares with the rest of terrestrial organic life. Hence the 6th Path of wisdom is called the Intelligence of the Mediating Influence.

The 6th Path is said to gather together the emanations of the archetypal influence. The powers of the archetypal world are outside the limits of time. The EGO in all of us is also outside those limits. The One Ego exercises dominion over everything below the egoic level, because it is free from the delusions rooted in the common idea that the past *was*, and the future *is to be*, while only the present is actual and real.

In order to establish the dominion over circumstances which is the main work of a Lesser Adept associated with the 6th Path we must act on an assumption which we do not understand; but because it is a correct assumption, we speedily accumulate a store of experience which teaches them the value of adopting this mental attitude. Thus we rid ourselves of impatience. We are free from hurry, of whom it is written: "He that believes shall not make haste."

Tiphareth is the point on the Tree of Life symbolizing the EGO center in the heart of man. At this point we feel the influx of the cosmic radiance which is the source of all personal activity. If we mistake what we feel and suppose it to be some power of our own, independent and self-originated, we fall into all the consequences of this error. When we truly understand ourselves, or as the parable of the prodigal phrases it, "come to ourselves," from then on we are in direct communication with the cosmic dynamo. No longer do we try to live by using up the energy of our personal storage batteries. We recharge them continually from the reservoir of universal vital energy. Then do we begin to discover the hitherto unimaginable potencies present within us. We begin to live radiant, beautiful lives. The burden is shifted from our personal shoulders. The Universal Life manifests itself through us with ever-increasing power and freedom. We find that we are children of the Spiritual Sun, possessing the sacred inheritance of strength and knowledge which enables us to be administrators of the perfect laws at work in even the least details of the Life-power's self-manifestation. We are Sons of God.

7th Path is *Sekhel Niseta*r

The 7th Path (Netzach) is called the Occult or Hidden Intelligence. It is so called because it is the brilliant splendor of all the intellectual powers which are beheld by the eye of understanding and by the thought of faith.

Hidden or Occult is from the verb *sawther* שָׁתַר, to hide, to veil, to cover, to conceal. This veiling has to do with the way desire manifests in human consciousness. We begin our journey toward adeptship while still deluded by the dream of personal separateness caused by the illusions of embodied consciousness. When we understand that the whole creation is mental we realize that the desires rising into our personal consciousness are intimations of what is already prepared for us. In the Briatic world all strong desires are actualities.

The whole creation is mental, and that the condensation of the invisible, intangible powers of mind into the visible, tangible things of the physical plane is always a projection of the Life-power through mental images. The eye of understanding and the thought of faith see our desires as being something rising into our personal consciousness because the Life-power makes them rise. Our desires are intimations of what is

already prepared for us.

The powers of this path are to be thought of as being hidden from the eye of sense, for it says the 7th Path is "the brilliant splendor of all the intellectual powers which are beheld by the eye of faith."

Intellectual powers is **הכחות השכליים** *ha-kakhoth ha-saykelim*, and the second of these two words is the plural of **שכל** *Sekhel*, which we translate "intelligence." What is intimated here is that all the powers of consciousness are concentrated in the 7th Path.

An old Latin commentary on the 7th Path says: "It is called Hidden because it is not to be comprehended by intellectual reckonings only; yet we distinguish it from the 1st Path, because the latter is truly incomprehensible, whereas this may be comprehended; and this path is also called that of intellectual substance." Insight into the 7th Path requires both self-conscious intellectual knowledge and the operation of an intuitive realization. There is nothing in the surface appearances which are the basis of man's "intellectual reckonings" which enables us to see with the "eye of understanding," and think with the "thought of faith." We must be taught from within.

The "eye of understanding" is a Qabalistic psychological term symbolized by the eye in a triangle which forms part of the national arms of the United States. This is the All-seeing Eye. The opening of the "eye of understanding," is a stage of spiritual unfoldment. It is the awakening of the pineal gland in the human brain. This is accomplished by the operation of the force which is described as being "the brilliant splendor of all the intellectual powers." What this force actually is, is clearly indicated by Qabalistic analysis of the word *Netzach* [נצח, 148]. Which is the magical reproductive force [ג], Medititional practices of balancing the interior stars [ז], and realization of the true value of personality and its relation to the Rider of the Chariot [א].

8th Path is *Sekhel Shalom*

The 8th Path (Hod, the 8th Sephirah) is called the Perfect Intelligence. It is so called because it is the dwelling-place of the Primordial. It has no root in which it may abide other than the recesses of Gedulah whence its essence emanates.

Shalom means: perfect, whole, uninjured, full, complete, sound, healthy. Full refers to completeness in number, measure and weight. The 8th Path indicates a kind of consciousness which brings forms to completion through applying the principles of mathematics to accurate measurement.

The Perfect Intelligence is the "dwelling place of the Primordial" or the Treasure of the Primordial" [תבונת הקדמות, 1,431] *Tekunath ha-qadmuth*. *Tekunath* is from a root meaning: to arrange, to measure. Through the powers of arrangement and discrimination, man brings the products of nature from their wild state into the perfection of those symbolized by the cultivated flowers in the Magician's garden. All advancement in civilization is the unveiling of Primordial Treasure. All magical practices partake of the knowledge which assumes that the objective to be reached is already an existing reality. It simply has not yet appeared to the eye of sense.

The Perfect Intelligence of Hod is said to have no root "other than the recesses of Gedulah, whence its essence emanates". This is the unflinching beneficence of Chesed, which is diametrically opposite to Hod on the Tree. It is the simple declaration that the desirable perfection of things to come is already provided for. True, we must make clear patterns of our objectives, but as we progress in our practice of the Magic of Light we understand that the patterns are truly shown to us. They are gifts from above and from within. Thus the Path of Mem symbolizes the consciousness, "I do nothing of myself." Thus *Mem* activates Hod with the Will force from Geburah.

Hod is a focal point in which the will force from Geburah, the image-making power of the Ego in

Tiphareth, and the desire force from Netzach are mingled. It is man's growing intellectual awareness of the essential perfection of the cosmic order. This combination of forces in the 8th Path is in Qabalistic psychology connected with the concentrating, intellectual operations of human self-consciousness.

Because man can measure, he is the form of existence which makes possible the completion of the Life-power's other modes of expression. Because man can arrange the elements of his environment in various kinds of order not spontaneously provided by nature, man is charged with finishing the Great Work. Because man is able to rearrange the forms composing his mental, emotional and physical existence, he may cultivate his personality as he cultivates plants and modifies animals. By such self-cultivation he may advance beyond the limits of the natural man and become a member of a new species.

In Binah, the Universal Mind contemplates what must follow from what it is in itself, and this great pattern of life-expression is held in the perfect memory of Chesed. Thus the essence of man's intellectual ability is the Life-power's perfect memory of what it is in itself (Chesed), and of what it foresees as the inevitable result of what it knows itself to be (Binah).

9th Path is *Sekhel Tahur*

The 9th Path (Yesod, the 9th Sephirah) is called the Pure Intelligence. It is so called because it purifies the essence of the Sephiroth, proves and preserves their images, and prevents them from loss by their union with itself.

The adjective *tahoor* means clean or pure. It gives the lie to all those false notions which put the stigma of impurity and uncleanness on those powers of organic life which are truly basic in evolution.

Yesod is the seat of the Vital Soul, [נפש, 430] *Nefesh*, the light and life force common to man and all forms of being below him. In the mineral kingdom, the Vital Soul expresses itself as the force which binds electrons together to form atoms, and results in the electric, magnetic and chemical phenomena of that kingdom. In the vegetable kingdom, the vital quality of this energy is more fully expressed in the power of reproduction which is the main characteristic of organic, as distinguished from inorganic, matter. Plants have senses as well as the rudiments of desire and volition, which are more fully displayed through the ascending scale of animal forms. In man, the whole range of powers, from the lowest mineral to the highest animal forms, is recapitulated, and these powers are present in the automatic consciousness of the Vital Soul.

Our text says the Pure Intelligence is what purifies the essence of the Sephiroth. The *Nefesh* in Yesod is, in some respects, like a filter, or like a distilling apparatus. In our human personality the Vital Soul is the active agency of subconsciousness. It is the Sphere of the Moon, the field in which a power is at work in the shaping, maintenance and transformation of our bodies. Through this work at the subconscious level of the Vital Soul are carried on all the operations of heredity. These do not include the transmission from generation to generation of the acquired characteristics and habits of a single personal incarnation. It is only the *essence* of the Sephiroth which is concentrated in Yesod. The accidental details of our various personal lives are filtered out.

The 9th Path "proves the images of the Sephiroth." This suggests its function is to test and try the fitness of every human personality. The word translated as "images" is a form of a Hebrew noun which signifies "form, model, pattern." Deep in subconsciousness are the patterns for every cell and every organ of our bodies. Sometimes, during the process of gestation, the shaping of the physical body is interfered with just as the development of crystals is sometimes conditioned by the circumstances in which they are formed. Yet the fundamental types are always present in subconsciousness. They are standards, and when the EGO selects personalities for entry into the Fifth Kingdom.

10th Path is Sekhel Mitnotzetz

The 10th Path (Malkuth) is called the Resplendent Intelligence. It is so called because it is exalted above every head and sits on the throne of Binah. It illuminates the splendor of all the lights and causes the flowing forth of influence from the Prince of Countenances.

Resplendent is from a root nawtzatz [נצץ, 210], to glitter, to bloom or to flower. Malkuth is called the flower of the Tree. The number of *Mathanutzatz* 656 is the same as Galgalim [גלגלים, 676], whirlings or whirling motion. Galgalim is term for the sum total of the manifestations of the cosmic forces which have their beginning in Kether. The Path of Malkuth in any world is always a receptacle for the total forces and activities expressed by that world.

The 10th Path is said to be "exalted above every head, and sits on the throne of Binah." Thus Malkuth is really identical with the 3rd Sephirah, Binah. The world of things we see surrounding us appears to be full of darkness and opacity. This is because we have not yet learned how to see *into* it. When we do, we find that it is all light and brightness. Analysis of the nature of the physical world makes all things appear as forms of the manifestation of a scintillating energy which is [אור, 207], *Aur*, meaning Light.

Malkuth is to Kether as is the fruit of a tree to its root. It is the point at which all the influences which descend from Kether finally converge, and the point from which, on the Way of Return, man's consciousness begins its ascent.

The root of the word [מלכות, 496], *Malkuth*, is [מלך, 90], *Melek*, King, which is one of the names for Tiphareth. Thus the essential idea behind the 10th Sephirah is that of the manifestation or expression of power to rule, derived from the EGO, or the Christos.

The temple of God is a house not made with hands, eternal in the heavens, and that temple is MAN... embodied man. Saint Paul said, "Know you are the temple of God, and that the Spirit of God dwells in you?"

That temple is already eternal in the heavens. The power that made the worlds, and rules everything in the universe, has its dwelling in this temple NOW. We do not have to wait until we are dead to know this. Nor do we have to do anything to establish the embodiment of the Kingdom of Spirit in our flesh.

Malkuth, Kingdom, is the physical world which is the seat of sensation and the physical body (guph). It is also the Sphere of the Elements, called [הלם יסודות, 564] *Cholom Yesodoth*, "The Breaker of the Foundations," because it is the field in which the fundamental unity of cosmic substance appears to be broken up into the four great classifications, designated as Fire, Water, Air and Earth.

11th Path is Sekhel Metzochzoch

The 11th Path (Aleph, joining Kether to Chokmah) is called the Scintillating or Fiery Intelligence. It is the essence of the veil placed before the dispositions and order of the superior and inferior causes. He who possesses this path is in the enjoyment of great dignity for he stands face to face with the Cause of Causes.

Scintillating or Fiery is root word meaning brightness, clearness, splendor. Thus the 11th Path is the channel for the first outpouring from Kether, the concentrated white brilliance of the Limitless Light.

Through the Path of Aleph, the Kether power is transmitted to Chokmah, and because all powers associated with Chokmah are above the human intellectual level, the Fool is the Tarot symbol of super-consciousness.

The 11th Path is the "essence of the veil placed before the dispositions and order of the superior and

inferior causes." This indicates that in its outpouring the Divine Self-expression veils its inner nature by means of the illusions of Name and Form which produce the phenomenal universe. A Qabalistic aphorism suggest the same thing when it says: "The Spirit clothes itself to come down."

The powers and privileges corresponding to Aleph are that the adept "beholds God face to face without dying, and converses familiarly with the 7 genii who command the entire celestial army." The 7 inferior causes are the 7 genii, and the text ends with the statement that he who possesses this path "stands face to face with the cause of Causes."

In the state of super consciousness, which may be experienced while yet we are incarnate on the physical plane, one does stand face to face with the glory of the Supreme Crown. For this reason, in our version of the Fool, he looks upward toward the left side of the Key, so that if the Key be placed on the Path of Aleph in the Tree of Life, the Fool faces upward toward Kether. Yet, to show that he comes from Kether, a white sun is behind him. This is to say that the goal toward which he turns his eager gaze is the same as the source whence he came. Waite says: "The sun, which shines behind him, knows whence he came, whither he is going, and how he will return by another path after many days. He is the spirit in search of experience."

The 11th Path represents the vision of the cosmic SELF which comes to those who experience super consciousness. It is the link between *Yekhidah*, the Cosmic Self and *Chaiah*, the life-force.

12th Path is *Sekhel Bahir*

The 12th Path (Beth, joining Kether to Binah) is called the Intelligence of Transparency because it is the image of that phase of *Gedulah* (literally, of that wheeling of *Gedulah*) which is the source of vision in those who behold apparitions.

The adjective Transparency or Light *Bahir* [בְּהִיר, 217] means clear, bright, transparent, lucid. Light in Hebrew is אֵשׁ, *Aur*. This light is universally diffused. The Hebrew account of creation says light manifested prior to the formation of luminaries, suggesting that the self-conscious attentive power of Beth is necessary to concentrate these units of diffused power into a central focus. Note that *Bahir*, has the same numerical value of word אֵשׁ, meaning, fiery.

The activity of Beth is said to be penetrative, specializing and particularizing. The word *through* expresses the idea that the path of Beth has something to do with an agency which carries a power from above to a level below. The word *into*, which is related to the grammatical significance of the letter Beth, expresses the idea that this path carries a force which descends into a field prepared to receive it. On the Tree of Life this power from above is Kether, and Beth carries its force into the field below, Binah. Beth is a symbol of self-consciousness, and is the mediating influence between Binah, the universal subconsciousness, and Kether, super-conscious. Thus the Intelligence of Transparency serves as a transparent medium for the passage of light.

The 12th Path is said to be the "image (body, or substance) of that wheeling of *Gedulah* which is called [חַחַזִּית, 440], *Chachazith*." It is derived from the same root as [חַזוֹת, 421] *chazoth*, signifying vision or revelation.

The mode of consciousness associated with the 12th Path is said to be a phase of *Gedulah*. *Gedulah* is the 4th Sephirah, the seat of memory. Vision requires memory, we do not really see anything until we recognize it. Yet, on the Tree of Life, we find *Gedulah* at a lower level than that of the 12th Path. This indicates that a phase of *Gedulah* is in the first Sephirah. This is in accordance with the Qabalistic doctrine that every Sephirah contains within itself a whole Tree of Life.

This is said that the 12th Path as "the source of vision in those who behold apparitions." "Apparitions" are

by not limited to ghosts, or to other phantasms. The power we are concerned with here is the power to perceive even ordinary sense appearances.

The higher and truer vision we designate by the term insight is the real power at work in the 12th Path. Superficial, careless, or lazy observers are never gifted with true insight. One must look attentively at appearances in order to develop ability to see into them. Just as a competent builder must know the ground where he intends to raise his house, the qualities and strength of the materials for his building, so must he who seeks to develop insight make himself thoroughly acquainted with the nature of the appearances surrounding him.

13th Path is *Sekhel Menhig ha-Achdoth*

The 13th Path (Gimel, joining Kether to Tiphareth) is called the Uniting Intelligence, or Inductive Intelligence of Unity, because it is the essence of glory and the perfection of the truths of spiritual unities.

Uniting Intelligence is literally: "Driver of Unities." The noun [מְנַהֵג, 108], *menahig*, driver, is from the verb מְנַהֵג, *minhag*, to drive (as a chariot). Note that the study of the Tree of Life and its relationships is often called "The Work of the Chariot."

This path is said to be the essence of glory, [עֵצֶם הַכְבוֹד, 237], *etzem ha-kabode*. *Etzem*, adds up to 200, the number of the letter Resh, the Sun. *Ha-kabode*, adds to 37, the number of the word *Yekhidah*, which designates the cosmic SELF in Kether. Furthermore, *ha-kabode* has the primary significance of **weight**, and is the Hebrew for **gravitation**. Thus the Gematria of *etzem ha-kabode* indicates that the "essence of glory" is really the gravitational force of the radiant energy which is concentrated in the first Sefirah. This glory is a radiance, shining forth from the light-source. The total value of *etzem ha-kabode* is 237, value of the letter-name Gimel, spelled in full, [גִּמְלָא מִיַּם לְמַרְן]. This is a direct correspondence between the name of the letter and what is said concerning the 13th Path.

The 13th Path is the "perfection of the truths of spiritual unities." From an old Latin commentary it says: "All the paths, when they are united with the Supreme Unity, are joined thereto through this 13th Path, for אֶחָד, *echad*, unity, resolved into a number, gives 13."

Through the path of Gimel, the influence from Kether passes to Tiphareth. The 6th Sefirah is the seat of the Ego of the entire human race. It is the Son who is "one with the Father (Chokmah)" and equally "one with the Mother (Binah)". Its link with the universal SELF (*Yekhidah*) is the perfect memory which that SELF has of itself throughout eternity; and because memory is the fundamental quality of subconsciousness, the Tarot High Priestess completes the expression of the power of Kether. Thus the 13th Path may be said to be the manifestation of the subconsciousness of *Yekhidah*, the cosmic SELF, as the 11th is the manifestation of *Yekhidah's* super-consciousness, and the 12th the manifestation of its self-consciousness. It is this subconscious, eternal self-recollection which is the basis of *Yekhidah's* manifestation in the activity of the One Ego of all humanity, seated in the Tiphareth.

The power of recollection is basic in the 13th Path. In the symbolism of the High Priestess it is represented by her scroll, which is inscribed with the word TORA, the Hebrew for law, to show that what we call the "laws of nature" are really the Life power's perfect memory of the orderly sequences of its self-expression. Fundamental in all manifestations of the Life-power is the operation of the electro-magnetic radiant energy, called *Aur*, Light.

14th Path, *Sekhel Meir*

The 14th Path (Daleth, joining Chokmah to Binah) is called the Luminous Intelligence, because it is the

essence of that which is the instructor in the secret foundations of holiness and perfection.

The adjective, *mowayir* [מַוַיֵּיר, 251], indicates a **derived** luminosity. This path originates in the Illuminating Intelligence of Chokmah, and Chokmah is the source of its light. Chokmah is the dynamo, and the Luminous Intelligence is the light-bulb glowing with incandescence.

The 14th Path is said to be called Luminous Intelligence "because it is the essence of that *Khashmal* which is the instructor in the secret foundations of holiness and perfection." The noun [חַשְׂמַל, 378], *Khashmal*, is a derivative from the noun נְחָשׁ [358], which is the Hebrew name for copper, the metal of Venus. Note also that the noun יְסוּדוֹת [486], *Yesodoth*, foundations, is the plural of Yesod, the name of the 9th Sefirah, attributed the reproductive activities of both microcosm and macrocosm.

A Latin commentary on the 14th Path terms *Khashmal* "establisher of the mysteries" and is called "the path of the hidden things of non-existent creation." The 14th Path is the pattern-forming power of creative imagination which shapes mind-stuff into form before the externalization of such mental patterns into things which are actually existing at the level of physical, tangible manifestation.

In the 14th Path we are dealing with the activity whereby the creative male life-force, which is identical with the energy streaming through space from the fixed stars passes into the field of differentiation and specialization represented by Binah. This activity is the generation, multiplication and development of the paternal seed (*Chaiah* in Chokmah), and its expression in mental imagery. This activity is both cosmic and personal. The Life-power brings the universe into being by creative imagination. We, utilizing the same power, shape our world and its circumstances in the image of "holiness," which is really completeness, or perfection.

Chaiah, the life-force attributed to Chokmah, is projected through the Path of Daleth into Binah, to complete the activator of the 3rd Sefirah. Daleth shows a woman crowned with 12 stars, typifying the zodiac. Yet she is pregnant to indicate that concealed within her is the paternal power of Chokmah, the Father. She herself is a symbol of the outcome of the activity of the Path of Daleth, as manifested in Binah. Note also the symbolism of the waterfall (male) and the pool (female) in the picture of the Empress. Daleth, Key 3 corresponds to the number of אב *Ab*, the Father, as well as to the number of Binah, the Mother. Again, at the feet of the Empress is a field of grain representing the multiplication (really subdivision) which is one of the ideas connected in occultism to 3. The 14th Path of Daleth joins Chokmah to Binah. The central point of this path, where it crosses the 13th of Gimel is *Da'ath* [דַּעַת, 474], Knowledge, for all knowledge has its root in the Divine contemplation of the perfect primal Beauty. Daleth is the first of the reciprocal paths which cross the Tree of Life, a bridge linking the Pillar of Mercy to the Pillar of Severity.

15th Path is *Sekhel Maamid*

The 15th Path (Heh, joining Chokmah to Tiphareth) is called the Constituting Intelligence because it constitutes creative force (or, the essence of creation) in pure darkness. According to masters of contemplation, this is that darkness mentioned in Scripture: "Thick darkness a swaddling-band for it."

The adjective *Maamid* [מַעֲמִיד, 164] is derived from a verb meaning "to rise, to stand erect." The phallic significance is confirmed by the attribution of the sign Aries. Since Mars is the ruler of Aries, the dominant power in the 15th Path is the Mars-force which is the active generative principle in nature. The universal creative force, *Chaiah*, is identical with the procreative power of living organisms.

The "creative force" is *etzem ha-briah* [עֵצֶם הַבְּרִיאָה, 423], literally "essence of creation." The word *etzem* is closely related to the word *etz*, signifying tree. Like the *Hyle* of the Gnostics, its primary meaning is "wood," but *etzem* is also translated in the English Bible as "body, bone, life, and substance." By its

numeration (200), *etzem* is closely related to radiant energy, Resh, corresponding to the Sun.

The second word *ha-briah*, adds to 223. The value of the mysterious word *abreach* [אברך], which means, "tender father" or "father of tenderness." It is also the value of the noun *Kabzeel* [קבצאל], "gathering of God." This word represents the concentration of the Limitless Light in the 1st Sefirah.

The creative force is "made to rise" in "pure darkness." The word translated "pure" is *tahoor* [טהור, 219]. This intimates that the creative force is a reproductive energy associated with the 9th Path. It is the seat of the generative forces of the archetypal Adam, and this Adam is the EGO seated in Tiphareth. Furthermore, the name of the 9th Sefirah, *Yesod*, is said by Qabalists to signify *Sod Yod*, "Secret of Yod," Yod symbolizes the phallus, and in this instances the word *secret* has a double meaning: something kept hidden or known only to a few, and something that remains beyond explanation or understanding.

The pure darkness in which the creative force is made to rise is the obscurity of the universal subconscious plane of life-activity represented by the 9th Path. Subconsciousness is the basis or foundation of all that makes its appearance in manifestation. It is the plane wherein the creative force is set in motion by the Constituting Intelligence. It is the "great womb" into which the seed of creation is cast. Hence, in the background of Key 4, on a level below that where the Emperor sits flows a river which symbolizes the stream of subconscious activity... the stream of the cosmic creative force, or Water of Life.

The Hebrew noun translated "darkness" is *awrawfel* [אורפל, 380]. The uninitiated regard the darkness as a thing of terror, mystery and evil. It is the devil of exoteric dogmatism (*Ayin*). Initiates perceive it to be a radiant darkness behind which they see the liberating, regenerative power (*Resh*). They understand that this creative force is what is represented as a flash of lightning (*Peh*) which tears down the prison of false science in which personal consciousness is immured. Finally, they know that this radiant darkness is the source of the power of adjustment which preserves the balance of forces in action throughout the universe (*Lamed*).

Heh is the 2nd Path from *Chokmah*, symbolized by the Emperor. It carries the influence from *Chokmah* to the 6th Sefirah. Characteristic of this path is the function of Sight. In this connection consider this passage from the 11th chapter of the Gospel according to St. Matthew:

"Everything has been handed over to me by my Father, and no one understands the Son but the Father, nor does anyone understand the Father but the Son and anyone to whom the Son chooses to reveal him."

16th Path is *Sekhel Nitzchi*

The 16th Path (*Vav*, joining *Chokmah* to *Chesed*) is called the Triumphant or Eternal Intelligence because it is the delight of glory, the glory of *Ain*, the No-Thing, veiling the name of Him, the Fortunate One, and it is called also the Garden of Eden, prepared for the compassionate.

The Hebrew for "Triumphant" is *Netzachiy* [נצח, 158]. It also means enduring, eternal and sure. This adjective is derived from the noun [נצח] Victory, the seventh Sefirah. What the Hierophant represents is a mode of consciousness which invariably results in triumphant or victory. This is because, in dealing with every problem of human experience, it provides those who open their interior hearing to the Voice of the Master an absolute certitude based on eternal principles.

Vav joins Wisdom to Mercy, for when creatures begin to exist, Mercy becomes active. This is the passage of Wisdom into the self-impartment of the Divine Spirit, through the self-contemplation of His (or Its) limitless possibilities as an eternal Spirit of Life.

This path is the consciousness of the victorious quality of the Life-power, and shows us also its freedom from all limitations of time. Through the letter *Vav*, this path is associated with intuition. Intuition is com-

munication of the Life-power's own knowledge of itself to the personal consciousness of a human being.

The Life-power knows always that it is engaged in a work which is bound to succeed. It knows always that it is subject to no limitation of past, present or future. It imparts this knowledge to us through the channel of memory, the specific function assigned to the 4th Sephirah.

The Hierophant is attributed to Taurus, which is an other association with memory. Taurus is ruled by Venus, the planet assigned to Daleth, and Venus is the planet which corresponds to the cosmic activity of creative imagination. All imagination, whether it be cosmic or personal, is the elaboration and development of ideas preserved by memory. Additionally, the Moon (Key 2) is exalted in Taurus. The High Priestess is a symbol of subconsciousness as the recorder of experience, and her scroll typifies memory. It is the Book of Cosmic Experience.

Gan ayden, Garden of Eden. Literally, "garden of delight." It is the garden in which grow the lilies and roses at the Magician's feet and wherein the Empress sits. Because *gan* [גן], garden, and *ehben* [עבן], stone, stand for the same state of conscious identification of the EGO with the cosmic, or universal SELF. They represent the state of Consciousness from which human personality is driven when it falls into the delusion of separateness resulting from eating the fruit of the Tree of Knowledge.

From Chokmah proceeds the Path of Vav. The Hierophant represents the Divine Wisdom, while the ministers at his feet, typifying knowledge (lilies) and desire (roses) stand for the Receptacular or Measuring Intelligence of the 4th Path of wisdom. The Triumphant and Eternal Intelligence, symbolized by Key 5, is the direct expression of the heavenly order, and as intuition makes us aware of that perfect correlation of forces, we are struck by its magnificence and made conscious of its beneficence.

The 16th Path is called "the delight of glory, the glory of *Ain*, the No-Thing, because, when at last we do hear, the message of the Inner Voice has to do with the mystery of the Divine Radiance, termed "glory." Thus whatever we learn from the Hierophant may be understood to be some aspect of the science of cosmic radiation, some portion of the universal truth concerning the One Power which is, in its physical manifestation, not only electro-magnetism and gravitation, but also the stuff from which everything we sense is made. When we receive the instruction we are filled with joy, and our joy is the emotion inspired by our realization that the Self within is none other than the eternal I AM, whose very essence is the *Ain*, or No-Thing. This we have in mind when we say: "All the power that ever was, or will be, is here now." Hence every communication we receive from the Inner Voice reveals some fresh truth concerning the ONE POWER Which Hindus call "Existence-Knowledge-Bliss Absolute."

The text says the 16th Path "veils the name of Him, the Fortunate One." This is because the letter-name, Vav ו, has the value 12, as the Divine Name [יהוה], *Hu*, or *Hoa*, "He," a third personal pronoun, one of the titles of Kether. Thus the Hierophant may be considered to be a symbol for the Cosmic SELF, Yekhidah, acting as the Inner Teacher of mankind.

17th Path is *Sekhel ha-Hergesh*

The 17th Path (*Zain*, joining Binah to Tiphareth) is called the Intelligence of Sensation (or, the Disposing Intelligence). It establishes the faith of the compassionate, clothes them with the Holy Life-Breath, and is called the Foundation of Tiphareth in the plane of the Supernals.

The adjective *ha-regash* is from a noun signifying feeling or sensation and an adjective which is derived from a verbal root meaning to rage, to be violently agitated. This connects the letter-name *Zain*, sword, and the idea of violent activity.

Long before we wake from our nightmare of separateness, our Mother prepares us. She is like a woman who hears her child crying in the night, and finds the little one struggling in the throes of a bad dream. Gently she wakes us and comforts us, and shows us there is really nothing whatever to fear. Years before

any person knows that he is interested in the higher knowledge, the Great Mother -the Divine Soul- is gently nudging him to wake him from his tortured dream. While we still sleep, her endeavors to arouse us are incorporated into our nightmares. Yet it is only the Mother, full of compassion, bringing him to realization.

While we remains in the grip of the dream, her touch frightens us the more. We believes it to be a tiger of disease, a wolf of poverty, a lion of oppression, a serpent of sin. The experiences which will finally liberate him are then interpreted as being all manner of dangers and miseries. When the dream is at an end, then we knows that the Mother was only shaking him into wakefulness so that he might be released from his pain and terror.

When we wake she takes us by the hand and guides us in her ways. This sense of contact with reality is what is said in our text to "establish the faith of the compassionate." Theirs is faith expressed by action, as shown in Tarot Key 11. It says "Amen," or "So be it," to all experience, because it understands the meaning of every event.

The Disposing Intelligence is called the "Foundation of Tiphareth in the plane of the Supernals." The power active in this path is the power of the Divine Soul, symbolized by Raphael in Key 6. The plane of the Supernals consists of Kether, Will; Chokmah, Wisdom; Binah, Understanding. Of these three, Binah is the Yesod, or Foundation, of Tiphareth, because without Understanding the EGO in Tiphareth would have no firm basis.

In Key 6, Zain, the angel Raphael (God the Healer) stands for the descent of Kether through the Path of Beth, whereby the One SELF is manifest in Binah as *Neshamah*, the Divine Soul. The woman represents the Great Mother, Binah, as the agency whereby the power of the One SELF is communicated to the Ego in Tiphareth. The man is Adam, the Ego in Tiphareth.

In alchemical books we read that the Great Work is performed by means of the Sun and Moon with the aid of Mercury. This is illustrated by the symbolism of Key 6. The man is the Sun, the woman the Moon. The angel is Raphael, angel of Mercury.

These symbols represent two aspects of the Life-Breath, Prana. The positive, male aspect is *Surya*, the sun. The negative, female aspect is *Rayi*, the moon. *Surya* is the hot, driving, violent current of Prana. *Rayi* is the cool, responsive lunar current, and what chiefly distinguishes it is *impressibility*.

These two currents, solar and lunar, work through two halves of the human body, chiefly along the nerves of the sympathetic system. The solar current works through the right half, which is called *Pingala*. The lunar current works through the left half, named *Ida*.

When the solar and lunar currents of the Life-power are rightly perceived, rightly discriminated, and when their operation is kept in proper order, the personality of the man engaged in this practice becomes a free, unobstructed channel for the outpouring of the cosmic life-force. Thus our text says the Disposing Intelligence clothes the compassionate with the Holy Life-Breath.

Zain is the first path projected from Binah which it joins to Tiphareth. Thus it is the link connecting the Divine Soul with the EGO. The Path of Zain suggest by its name the operation of the Supernal Understanding *in separating the creatures produced* by the Constituting Intelligence, into species, classes etc. The fundamental separation is that of sex, and hence this path is indicated by Zain the Sword, and by the Lovers.

The text says, 'disposes the righteous to faithfulness,' or establishes the faith of the compassionate. The righteous are those who have brought their thought, feeling and action into harmony with the universal order. And the faithfulness to which they are disposed is symbolized by Key 11 (the Faithful Intelligence). Those disposed to faithfulness are 'clothed with the Holy Life-Breath.' In Key 6 this is symbolized by the nude figures. They hide nothing. There are clothed with Spirit, which is synonymous with the element *Air*.

Thus they are clothed with the Life-Breath (Key 0) and given powers unknown to ordinary human beings.

18th Path is Sekhel Beth ha-Shepha

The 18th Path (Cheth, joining Binah to Geburah) is called the Intelligence of the House of Influence; and from the interior walls of its perfections the arcana flow down, with the hidden meanings concealed in their shadow, and therefrom is union with the innermost reality of the Most High.

The noun "influence" suggests the notion of water. The Hebrew *shefah* occurs once in the Old Testament, where it is translated "abundance." "They shall suck the abundance of the seas." Here the idea of abundance is directly connected with water. In this passage there is also an occult reference to time, because the word for *seas* is *yomim* [יָמִים], 100] identical in spelling with a noun which signifies *days*.

The 18th Path is related to water, or to activity like that of water, when it says the arcana "flow down." Flowing motion having its origin at an inner source which is also superior is what the phrasing suggests. The arcana, or hidden powers of super-consciousness, do flow down into the personal field, but this same super-consciousness is the *depth*, the Great Within. It is the Holy of Holies, the Adytum of the Inner Temple. From this source power flows down into our daily experience.

The power is truly like water, as intimated by Cheth corresponding to Cancer. The power comes in waves. It runs in currents. It ebbs and flows. It is purifying, and in it all forms are held, either in suspension or in solution. Often it is compared to a great ocean. Thus Binah, the source of the 18th Path, is called the Great Sea as well as the Great Mother.

In Key 7, the houses in the background refer to the Path of Beth, which joins Kether to Binah. The walled city is a reference to Binah, for the "Holy City," is symbolic for Binah and the Sanctifying Intelligence. The chariot and the charioteer, together with many other details of the design, give a martial aspect to this Tarot Key. Thus what is in the background of the picture relates to the Sefirah from which the Path of Cheth begins, while what is in the foreground relates to the Sphere of Mars, the seat of Volition, in which the Path of Cheth is completed.

Thus the consciousness developed by a Greater Adept is dependent on his adopting the interpretation of human personality as being the vehicle or instrument of the Divine Soul. This is symbolized by Key 7, carrying the influence from the third Sefirah to the fifth.

Not until this separating influence has projected the power of Understanding into Beauty, can the activity of Severity be manifest through the Path of Cheth, which, setting off definite fields of operation, and so in a sense circumscribing the expression of the Divine Understanding, brings into actual effect the Radical Intelligence of Geburah.

19th Path is Sekhel Sod ha-pauloth ha-Ruachnioth

The 19th Path (Teth, joining Chesed to Geburah) is called the Intelligence of the Secret of all Spiritual Activities because of the influence spread by it from the supreme blessing and the supernal glory.

The prime secret of the 19th Path is that whatever exists is a form of spiritual energy. Every form of spiritual energy is subject to the direction and control of the form above it. The conscious imagery of man is a form of spiritual energy. All forms below this level are subject to its direction. It, in turn, is subject to the influence which descends from super-conscious levels. This flows down into subconscious levels through the agency of the mind of man, which is the mediator between that which is above and that which is below.

Man is the synthesis of all cosmic activities. Human intelligence gathers together all the various threads of the Life-power's self-manifestation. By the operation of the law pictured in Key 8, human intelligence is able to carry the cosmic life-expression into manifestations beyond anything which could come into existence apart from man and his intelligence. By controlling subconscious production of mental images man can "open the lion's mouth," and bring sub-human forces under the direction of systems of thought appraised in words.

The power at work in the 19th Path proceeds from the 4th Sephirah. Which in turn receives the Wisdom of Chokmah through the Path of Vav. One part of the secret is that the woman tames the lion because she has been instructed by the Hierophant.

The dominant influence in the 19th Path is recollection, and remembrance is part of the secret. Through contact with the deeper, more interior levels of memory, it is possible to discover that the cosmic order is not merely a mechanism. When we learn how to listen, it speaks to us. On the mechanism of nature are written characters we may learn to read. Within us is a point of contact with a principle of knowledge which reveals to us the meaning of all experience. No matter what may be the appearance of an event, it has a meaning for us, and one which may be put to effective use in what we think, say and do.

Another part of the secret is the truth that even now human life extends beyond the limits of the physical world. Man is a 4-dimensional, immortal being. Thus one of the practical consequences of attaining to that mastery of sub-human powers which is pictured by Key 8 is the liberation of man into conscious awareness of immortality.

Individual knowledge and experience of immortality is achieved by those who learn how to direct and control the Mars-force by means of mental imagery. This is another aspect of the secret of the 19th Path.

At this point the Spirit's full realization of Its power as a limitless self-imparting Principle, manifested in limited forms of expression, unites the potencies of Mercy to those of Severity, through the Path of the letter Teth. This path is also called Intelligence of the Secret, because the Great Arcanum is based upon the fact that Limitless Life expresses Itself in limited forms. Therein you may discover the great secret of all magical operations, the Arcanum of the equilibrium between Severity and Mercy.

Notice also that this path crosses that of Gimel. The central point of the magical equilibrium is the realization that the **Primal Will** eternally projects Itself in Beauty; and this Path of Gimel being that of the Uniting Intelligence, the implication is that the true equilibrium can only be attained by means of the conscious self-identification of the personal will with the Universal Self-direction toward the realization of Beauty.

20th Path is *Sekhel ha-Ratzon*

The 20th Path (Yod, joining Chesed to Tiphareth) is called the Intelligence of Will because it forms all patterns, and to know this Intelligence is to know all the reality of the Primordial Wisdom.

Rawzone, Will, by its four letters represent radiant energy or fire (Resh); air (Tzaddi); earth (Vav); and water (Nun). The occult significance of the word relates to the idea of a synthesis of the four elements, which synthesis is none other than the One Reality, the Ancient of Days represented by the Hermit, and customarily designated by the Divine Name Jehovah.

What men feel in their very bodies as the power called "will" is the surge of the light-force through blood stream and nerve and tissue.

The possessor of the Path of Yod is truly "acquainted with the laws of perpetual motion," because this path leads to perfect identification with the One Conscious Energy, and to profound knowledge of its eternal laws. The infinite whirling motion of the Limitless Light is the true perpetual motion. They who know the secret of the Intelligence of Will possess a full knowledge of this energy and of its laws.

Thus they are able to demonstrate, or to make manifest in their control of circumstance, their perfect union with the **One Will Power**. This pure spiritual will is the perfect circle of Divine Life. He who is in union with it appraises the perfect order in all that he does. That order is symbolized by the number 4, and the square. It is the perfect order of the Measuring Intelligence of the Chesed descending into Tiphareth through the 20th Path of wisdom.

Of this path it is said that "it forms *all* patterns, and to know this intelligence is to know all the reality of the Primordial Wisdom." Yod carries the influence of the cosmic memory seated in Chesed into the EGO in Tiphareth concentrated in a complete realization of the cosmic purpose, indicated by the name of the Path, Intelligence of Will. The Hermit, who is looking down and back over a path which his own footsteps have made, is clearly related to memory. He illustrates the masculine expression of Beneficence, through Yod, the letter of the Father. Yet there are feminine concepts in this Key, notably in its relation to the sign Virgo.

21st Path is *Sekhel ha-Chaphutz ha-Mevupash*

The 21st Path (Kaph, joining Chesed to Netzach) is called the Intelligence of Desirous Quest because it receives the divine influence, which it distributes as a blessing to all modes of being. Desirous Quest (literally, "the inclination to seek"), is from a root word *meboqash* meaning "emptiness," and has a meaning akin to the English nouns "hunger" and "thirst." In Man's quest for abundance, like his other personal activities, is a response to the descending influence of the Life-power. We seek because what we seek is really within us, and whatever we gain is actually a recollection of what the One Identity already has in store for us.

When first we enter the Path of Desirous Quest, we have vague notions concerning what we are seeking. We feel an aching emptiness of mind and heart. At the very beginning we are prone to think that if only we possessed certain things, if only we could find ourselves in different circumstances, all would be well. After awhile we begin to get brief flashes of the Inner Light, and in time these make us realize that the essence of all right desire is the longing to *be*, rather than the wish to have. Ultimately we come to understand that the desire to be is the Life-power's way of revealing to us what we really are. The Way to Liberation is the path of discovery leading to full perception of the true nature of the SELF.

One of the secrets of the Path of the Desirous Quest is the balance of our interior stars through meditation. Nobody ever succeeds in meditation who was lukewarm in his desire for freedom. Meditation, especially in its early stages is hard work. It must be persisted in for some time before any striking results are attained. We must hunger and thirst after righteousness and be steadfast in meditation before we taste its fruits.

Another secret is courage. To develop this, we must face difficulties and learn to solve problems. To affirm the "goodness of ALL" is to speak truly enough, but our human problems need that affirmation for just one reason -to give us strength to face our problems boldly, because we are confident we have at our disposal a power adequate to turn these very problems into magnificent opportunities. To stop with the affirmation, to turn ourselves into talking-machines which do nothing but repeat such affirmations, is to be guilty of the sin of vain repetition. What we need most is to use daily that day's "sufficient evil."

This means keeping awake now. It means to interpret the experiences of the present as being particular dealings of the Divine Spirit with our souls. Day after day it subjects us to tests. To dread the future is supremely unintelligent. To refuse to face the appearances of evil in the present is even worse.

The illumined mind lives in eternity, and the only human word which truly designates this eternity is **now**. **Now** is truly the acceptable time. **Now** is truly the day of liberation. Guidance comes **now**, or not at all. Or it would probably be more accurate to say that although every human being is always under guidance, whenever he is truly aware of it he knows it to be active **now**.

The Path of Desirous Quest is associated through the letter Kaph with the planet Jupiter. Thus it is pictured in Key 7 of Tarot by the wheels of the chariot. There are two wheels to symbolize that in order that the influence of the 21st Path is made effective in human life, it must be felt subconsciously as well as consciously. It is not enough to have an intellectual perception of the truth that through this path we receive the divine influence, and partake of the blessing it distributes to all modes of being. Such perception is necessary, but it is not sufficient. It must permeate our subconsciousness, and be built by subconscious activities into the entire structure of the personal vehicle. This is one reason for the emphasis placed on meditation. Truth must be printed indelibly on subconsciousness, so that we never forget its principles. Thus only may it bear fruit in our lives.

This final path from Chesed ends in Netzach, the 7th Sephirah, seat in man of the desire nature. The static manifestation of Beauty is not effected until after the Path of Kaph, or Conciliating Intelligence has brought Netzach into activity by the projection of the influence of Chesed, because Karma does not begin to operate until the turning wheel of manifestation has brought into the field of the unfolding universal self-consciousness a definite conception of the victorious end towards which its self-impartment is directed. Karma cannot be supposed to work without an objective, and the nature of Spirit assures us that its objective must be the successful outcome of the creative process. Hence Lamed and the 22nd Path follow Kaph and the 21st.

22nd Path is *Sekhel Ne'eman*

The 22nd Path (Lamed, joining Geburah to Tiphareth) is called the Faithful Intelligence because by it spiritual powers are increased. All dwellers on earth are under its shadow.

The psychological drive in this 22nd Path is volition. It is fiery and Martian in quality, but it is also what a Hindu would call "Pranic force," partaking of the spiritual power which is associated with air or breath.

Its urge is toward increase, and because increase is growth, we may understand the power of the 22nd Path to be related to the reproductive drive which insures the continuation of species.

When we will, we aim invariably at change. Every strong volition is a practical demonstration of the misconception that any human is an independent, separate personality. The magical will is not the false self-will of those who seek to impose their "own way" on other people, or on circumstances. It is what Eliphas Levi calls the "will of intelligent beings." They are the true adepts, whose will is law, because it is perfectly identified with the absolute Justice which is attributed to Geburah.

Man is never, as a personal being, the thinker, the speaker, or the actor. Every thought, word, and deed, is the operation of the sum-total of universal powers and laws, known and unknown, taking form through the instrumentality of a human being, or other active center of expression for the One Life. This is not fatalism. It is simply right discrimination between the personality and the **Self**. The **Self** is the Indivisible One, the sole originating Principle of the universe. Personality is dependent, conditioned, determined. The Self is absolutely free, and is the conditioner and determiner of the functions and activities of personality.

He who, in consequence of right instruction and right practice, sees the truth of reality and has intuitive perception of its inner significance, is in a position to make new combinations through the exercise of creative imagination. Man is the instrument for the modification of the cosmos in which he finds himself. Human personality is the indispensable agency whereby the Life-power completes the Great Work. All work, including the "Great Work" is related to the 22nd Path. By looking at Key 11, one knows the ancient dictum, "Equilibrium is the secret of the Great Work."

This equilibrium is effected in human life through the agency of subconsciousness. Thus the central figure in Key 11 is the same as the High Priestess. The pomegranates on the veil behind the High Priestess are symbols of the **increase of spiritual powers**, mentioned in the text. They are symbols of the Sephiroth on the Tree, because the Sephiroth do summarize all spiritual powers.

Though subconsciousness is the immediate agency whereby the transformations and transmutations of the Great Work are brought about, the work itself is under the supervision of Key 4. In the tableau, Key 4 stands above Key 11, indicating that success in the Great Work must be well grounded in theory before attempting to practice. Poor reasoners never succeed in the operations of the 22nd Path.

Thus the transformations of personality which constitute the primary work of the alchemist are accomplished under the direction of self-consciousness. They are the results of clear and definite intention, and of long-continued practice.

In the sign Libra, corresponding to this path, Saturn is exalted. In the Great Work, the serpent-power is exalted or lifted up by the process of sublimation. Thus the hilt of the sword of Justice is a T-cross, symbolizing the Saturn force at the base of the spine, it is shown raised up to indicate its sublimation and combination with the Mars force.

The Greater Adept becomes a conscious administrator of cosmic justice. He begins with himself and trains himself to regard all his actions and work as being not his own but merely personal expressions of universal laws. He enters with all his powers of mind and body into action; but, through meditation and reflection, makes habitual the thought that whatever he thinks or says or does is accomplished *through* his personality, rather than *by* it. He looks on his life as being devoted to making manifest the operation of Divine Justice.

Thus Key 11 represents this mental attitude, shows a feminine figure reminiscent of the High Priestess, but having yellow hair like the Empress, and like the driver of the chariot in Key 7. This symbolism is intended to show that Key 11 represents an *habitual* attitude, one which is maintained consistently, because it has been made subconscious.

Lamed is the link between the Sphere of Mars, seat of volition, and the Sphere of the Sun, seat of the EGO. It shows a feminine influence in the activity of Faithful Intelligence which perfects or completes the static manifestation of Beauty through equilibrated Action or Work (Karma).

23rd Path is *Sekhel Qayyam*

The 23rd Path (Mem, joining Geburah to Hod) is called the Stable Intelligence because it is the power of permanence in all the Sephiroth.

The Path of Mem descends from Geburah and participates in the influence carried from Chesed to Geburah through the Path of the letter Teth. The Hebrew adjective translated "stable" is from a verbal root meaning "to rise," or "to raise from below," This has to do with the controlling, and raising or sublimating the serpent-power, Kundalini.

The 23rd Path is "the power of permanence in all the Sephiroth." This power of permanence is related to rhythmic, controlled vibration. The Hebrew term is *kach qiyom* [כח קיום, 184], the power of: "duration," or "existence," as well as by "permanence." It also means "confirmation."

The Hanged Man is a synthesis of the whole Tarot; and Mem is placed with Tav at the center of the Cube of Space. These two letters form the word *toom* [תום, 440], signifying the ultimate attainment and ultimate perfection. This is a power which is central, permanent, and directly connected in the cube symbolism with the Palace or Temple of Holiness in the midst supporting all things. Samadhi leads to complete identification with the ONE POWER. This is no more intellectual apprehension. It makes a tremendous difference in the man or woman who experiences it.

The Hanged Man has white hair, like the Hermit and the Emperor, and the state of perfect stability of mind he symbolizes cannot be arrived at without reasoning, nor can it be attained without the secret operations over which the Hermit presides -the subtle changes in the body's chemistry which take place in the region governed by the sign Virgo. Yet the main thing achieved in the seedless Samadhi pictured by Key 12 is the

high vision of which the Tarot Fool is one of the principal emblems.

The 23rd Path is the third in the descent from Kether along the north side of the Tree of Life. Thus it is a consequence of what Tarot pictures by the Magician. A seer in Samadhi does not for a moment lose self-consciousness. He can descend into ordinary modes of human life at will. He may abstract his attention from the phantasmagoria of sensation, but whenever he wills to do so, he can resume his place among ordinary human beings who do not share his vision.

Concentration is the beginning of the practical work which makes one a possessor of the 23rd Path, and the absolute impersonality suggested by Key 12 is a direct consequence of the seer's realization that his personality is what is pictured by Key 7. Only as a consequence of prolonged concentration can the ordinary notion that a human being is a person separate from others, and possessed of autonomous free will, be completely reversed so that it is replaced by the attitude of complete dependence symbolized by the Hanged Man.

The associative functions of subconsciousness are limited by concentration. Therefore, the Hanged Man (suspended mind) is supported by a gallows in the form of the letter Tav, associated with Saturn, astrological representative of limitation. The Hanged Man is the adept bound by his engagements." The engagements are like those of one wheel with another in a piece of machinery, like engaging the clutch in an automobile. This is a consequence of a definite *intention* on the part of the person who is practicing control of the fluctuations of the mind-stuff.

In the earlier stages of the work, this intention has continually to be recollected. A continuous flow of knowledge in a particular object is impossible unless the object be remembered, and thus kept in mind.

The path connecting Severity (will) and Splendor (intellect) is the letter Mem. Key 12 is the last path passes the influence of Geburah to Hod. The Hanged Man is merely a further development of what is shown by Key 11. The Greater Adept suspends all ordinary notions of personal activity. He is certain he does nothing of or by himself. He rests secure in his knowledge that the universal life and law support him. He is truly "the adept bound by his engagements" because even the least details of personal activity are seen by him to be "engaged" to the other activities of the cosmos, just as a wheel in a watch is "engaged" to the rest of the works, and moved by the power of the mainspring.

Note that the Hanged Man is pictured as being a pendulum. This piece of symbolism was intended to suggest the very "clockwork" simile we have just employed in this paragraph.

The fixed unwavering self-contemplation proceeding primarily from the supernal Understanding is associated with Mem because of the Creator's self-understanding. When this state of the universal consciousness finds expression through a personal form, complete realization of the divine Splendor is made actual.

24th Path is *Sekhel Dimyoni*

The 24th Path (Nun, joining Tiphareth to Netzach) is called the Intelligence of Resemblance (or, Imaginative Intelligence) because it constitutes the similarity in the likenesses of all created beings.

The work of the 24th Path have to do with modifications of the blood. Note that the first two letters of *Dimyoni* are דם, the Hebrew noun for blood. The rest of the word נִי, is numerically equivalent to a Hebrew noun תְּכֵיִן, meaning "hidden treasure." The secret of the 24th Path has something to do with valuable occult properties of blood.

We may understand Key 13 as a symbol of the will-to-live, and this will enable us to see why this path is the link between the EGO and the desire nature. All our desires are but variants of the will-to-live. What we all want, no matter what forms our desires may take, is more abundant life. When we grasp the truth

that our desires are intimations that we already possess what we seem to lack, then we arrive at the state of freedom from desire.

The 24th Path is one in which the Ego's power to project mental images is the fundamental activity. Desires inevitably tend to take form in some sort of physical action, and every physical action is a little death. The work of practical occultism tends to put out the fires of desire, and to put an end to the generation of a multiplicity of mental images leading to action.

When we realize that human personality never acts of itself, the chariot comes to a stand-still. When one is truly fully absorbed, through Samadi, with the One Self, one is identified with the Actionless. The one becomes like the sphinx in Key 10. The wheel of manifestation turns, but the SELF remains immobile. There is nothing to want because we realize our perfect union with the Possessor of ALL. Then we can say, "All power is given me of my Father."

Note well that present tense. The will-to-live ceases when we find within ourselves the fountain of Limitless Life. Tasting of that, we thirst no more. This is by no means sterile indifference to living. It is realizing Limitless Life to the full. To get rid of the will-to-live is not to lose interest in living. It is to put a plus sign for a minus

We kill our own bodies by our restless struggles to acquire what, if only we knew it, we already have. When life flows through us unobstructed, the balance of metabolism is maintained. We find we never were born. We know we shall never die. We learn that we are four-dimensional, not three-dimensional, beings, and enter into a realm of power and joy for which there are no words. The possessor of the 24th Path has this awareness, and his subconsciousness weaves the realization into the very cells of his body.

Through Nun descends the influence from Tiphareth to Netzach. It is the link between the Ego and the desire nature, between the Sphere of the Sun and the Sphere of Venus. The Path Nun is the first manifestation of the dynamic or projective aspect of Tiphareth (as contrasted with the static or receptive aspect). It is called "Imaginative Intelligence" because the primary activity of Beauty works through imagination in bringing about new modes of expression. This involves the passing away of the forms which are supplanted by those which imagination calls into existence.

New forms are developments of the old, this is suggested by the nature of the harvest gathered by the Reaper in Key 13. The result is the perfection of Netzach, for through the transformations wrought by the power of Beauty, the final Victory is attained.

25th Path is *Sekhel Nisyoni*

The 25th Path (Samekh, joining Tiphareth to Yesod) is called the Intelligence of Probation or Trial because it is the first test whereby the Creator tries the compassionate.

The adjective is derived from *nisawyun* [נִסְיוֹן, 176], meaning "trial, temptation, test, experiment, experience." Probation or Trial, signifies the testing of the ideas and innovations suggested by the imagination. It joins Beauty to Foundation, because only by experiments, trials and tests can the harmony of Tiphareth become actualized in term Foundation.

The work of this path is described as being the "first test whereby the Creator tries the compassionate." They to whom this test is applied are the Chasidim, in whom is active the spirit of mercy derived from the 4th Sephirah.

The Chasidim do nothing of themselves. The One Ego symbolized by Michael, the Angel of Jehovah, is the real Actor in all personal thinking, speaking or doing. With them this is an ever-present recollection. This state of mind is established in one who has gained the Grade of Exempt Adept by practice, and the practice is shown by Key 5 which symbolizes the essential meaning of Key 14.

The difference between the two Keys and their corresponding paths is that Key 5 has to do with *receiving*

instruction, while Key 14 has to do with *testing* the instruction in the fires of actual experience.

The object of this practice, then, is not to put an end to this condition of flux of the mental stream, which would be impossible; but to direct that stream always in the sense in which we desire that it should progress. And the method advocated consists in constantly observing, in standing apart and watching and noting accurately just what we are doing all through our daily life; combined, on the one hand, with a constant effort to cast out the Self-concept from our consciousness as they arise; and, on the other hand, with keeping before us all the time the recollection of our high aim; that we are doing all this to reduce the suffering of life.

And so with whatsoever you may be engaged on, you sit apart, as it were, and intently watch, down to the minutest detail, what you are doing; you suppress as far as possible all idea that it is *you* that do these things.

The flow of power from above or within produces the *feeling* of "egoity." The error of supposing each of us *owns* a "self" is what makes all the trouble. The truth is the reverse. Every single human personality is "owned" by the Ego in Tiphareth.

The simple terms of the Rosicrucian vow to look upon every circumstance as a particular dealing of God with one's soul provide a clear pattern for right recollectedness. Sooner or later it will dawn upon us that even our decision so to regard every event, and our mental effort to keep the vow, are just as much part of God's particular dealings as anything else. Then the difficulties vanish, and we find that the "royal yoga" is veritably the "easy yoke."

In Key 14 of we see a crown in the background, symbolizing Kether. The Path in Key 14 stands for the two paths above Yesod, and the pool at its lower end is the ninth Sephirah, seat of the Vital Soul. On one side is an eagle, to indicate Scorpio and the Path of Nun. On the other is a lion, the "roaring lion" which is one of the symbols for the devil, the Path of Ayin, Key 15.

Key 14 shows the Ego as the Holy Guardian Angel, tempering and modifying the Vital Soul, and communicating to it the direct influence from Tiphareth. The angel is Michael, representing the powers of the sixth Sephirah, the Sphere of the Sun. For the Holy Guardian Angel is none other than the Ego which is the true Actor and Knower, manifesting its consciousness and energy through the personal awareness and activity of innumerable human beings. When a student devotes all his personal actions to the direction of this Holy Guardian Angel, there results a modification of the activities of the Vital Soul and its automatic consciousness. The practice of completely devoting all personal action, both mental and physical, to the SELF brings about the purification of the automatic consciousness. The inevitable result is an alteration of the habitual, subconscious time concept.

Jupiter, the Wheel of Fortune, rules Sagittarius. Thus the work of the 25th Path is concerned with our daily testing by Spirit, to see whether or not we interpret our experiences correctly as being cosmic events, just as truly as they are personal activities. Notice that we do not have to deny that they are personal activities which really occur. What we get from our steady watchfulness is the comprehension that what we call a "personal activity" is that something more, and the something more is its being a special manifestation, in our personal field of time and space, of forces and laws which flow into that field and out of it, but never originate in it.

26th Path is *Sekhel Mechudash*

The 26th Path (Ayin, joining Tiphareth to Hod) is called the Renewing Intelligence because thereby God -blessed be He- renews all things which are begun afresh in the creation of the world.

The root of this adjective is akin to the verb in Psalm 51:10: "Create in me a clean heart, O God; and *renew* a right spirit within me." The same verb appears in Psalm 104:30: "Thou sends forth thy spirit, they are created: and thou *renews* the face of the earth." Of similar import is the passage in Revelation 21:5:

"Behold, I make all things new."

The Life-power is not only the Creator and the Preserver, but also the great Renewer. In the process of renovation, old things pass away, and the unenlightened, clinging to familiar forms, distrust and fear these changes. This is why ignorant misunderstanding hates innovations, and looks upon the leaders of new movements as being inspired by the devil.

The work of this path is concerned with man's conscious, personal grasp of the meaning of his daily experience. The development of this conscious comprehension requires that persons be brought face to face with problems. For the ignorant, these problems are evils, caused by some principle of malice, working in external nature and in human nature, to bring about various natural disasters, and various types of human wickedness. Out of their own enlightenment the wise learn better. They come to recognize the Ego as being the only Actor. They know that their past "sins" are wholly forgiven being the inevitable imperfections of human thought and behavior expressed through the lives of unenlightened persons.

They look back over the panorama of their personal lives (for full enlightenment brings memory of other incarnations), and see that all their "personal" activities were part of the Work of the Chariot. They find plenty of imperfections, but see how they were inevitable at the various stages of development. *They find nothing to condemn.*

From their own experience they are taught that there is nothing to condemn in the life of any human being. There are many imperfections, but the person who sins and fails is simply a vehicle which the Life-power has not yet completed, and the Life-power does not condemn even the least of its unfinished instruments.

This does not open a door for sentimental condoning of ineffective, ill-judged, or false ideas or actions. *Actions* may be rightly judged (but only by those who are truly God-taught) as being "missings of the mark." *Persons* fall under no condemnation.

An enlightened man sees how the Ego works through the total expression of humanity to achieve its end, and that end is the liberation of all. Thus the wise believe in democracy, believe in the good results of enduring in political affairs, by the expressed will of the majority. For they have first-hand experience to teach them that no matter how blind and ignorant persons may be, there is truly "a Destiny which shapes our ends, rough-hew them how we will."

That Destiny is the Ego, the Son in perfect union with the Father, the Anointed Liberator in Tiphareth. Angel of Death, to make the Great Work possible. Angel of Guidance, to set our feet upon the Way of Peace. Angel of Temptation, misunderstood by the ignorant as the Devil, when in truth he is the Eternal Renovator forever making all things new.

The 26th Path of wisdom carries the power of Ruach in Tiphareth down to Hod. It is the link between the Sphere of the Sun and the Sphere of Mercury, between imagination and intellect, and between the Egoic Body and the Mental Body. This path have to do with the means whereby the EGO in Tiphareth effects changes in man's personal intellect, which corresponds to Hod at the lower end of the Path of Ayin.

The Path of Ayin is perhaps the most obscure of all. The "Renewing Intelligence" completes the dynamic expression of Beauty (Tiphareth) by union it to Splendor (Hod), on the side of the pillar of Severity. The key to the mystery of this path is the word *limitation*, and it is the Renewing Intelligence because it is the source of human consciousness of limitation, incompleteness, lack and bondage. Our sense of bondage is the reflection of our intuitive knowledge of the freedom of That, which is the essential Self of every man. When we consider the small extent of our personal achievements, the essential perfection of the One Self seems to be an unattainable ideal. The sense of bondage however, is what drives man to seek freedom, and thus it leads at last to the Splendor which is the consequence of the strict justice of Geburah and the outcome of the dynamic impulse toward Beauty which pervades creation, while at the same time, this Splendor is the reflection of Victory (Netzach).

The skeleton in Key 13, the angel in Key 14, and the devil in Key 15 are not three different things. They

are three aspects of the One Ego, as that Ego appears to personal consciousness. In dealing with Key 15 we are to understand that the devil is really Master of the Game. He represents the way the Ego appears to the ignorant. He typifies what seems to be the threatening lion of Key 14. Yet he really is what brings about man's intellectual development, and for this reason the symbol of Mercury is a prominent detail of Key 15. It is by meeting and solving problems which threaten him that man develops intellectual power. So long as man accepts the superficial appearances of his environment at face value, his intellect does not evolve. So long as he believes in evil spirits, or in a single Lord of Evil he cannot catch a glimpse of the Eternal Splendor corresponding to the 8th Sefirah.

27th Path is *Sekhel Morgash*

The 27th Path (Peh, joining Netzach to Hod) is called the Exciting or Active Intelligence because thence is created the spirit of every creature under the supreme orb, and the assemblage of them all.

From a verbal root meaning "to be noisy, to be tumultuous, to rage." Thus the 27th Path assigned to Mars may be considered to partake of the nature of Geburah. It is as if the current descending from Geburah through Tiphareth to Netzach were reflected back to Hod through this path.

The first path flowing from Netzach is Peh, symbolizing the overthrow of "common sense" by spiritual intuition. It stands also for the Mars force which is active in Geburah, and which finds expression in the activities pictured by the Emperor and by Death. It is the force which works in man's brain to give him the higher vision which sees *into* things, instead of just looking *at* them. It is the force which is not only the means whereby man's physical life is reproduced in his posterity, but also the power which enables him to reproduce himself in new patterns of circumstance.

There are two ancient titles for Key 16, "The House of God" and the "The Fire of Heaven."

"The Fire of Heaven," *esh min-ha-shamaim* אֵשׁ מִן הַשָּׁמַיִם [786], refers to lighting in 2 Kings 1:10. Lighting is the Holy Influence called *Mezela* [78], its descends through the Tree of Life and the 32 Paths. It is symbolized by the lighting-flash in Key 16. *Mezela* is the radiating energy projected from Kether whereby all things are brought into existence. It is a whirling force, and in its physical expression is the spiraling, electro-magnetic energy which is the substance from which the atoms of the physical universe are constructed. Additionally, the "water" of the alchemists is fiery. Electricity is often described as being a fluid. The Mars-force and this electrical fluid are identical.

Beth ha-Elohim בֵּית הָאֱלֹהִים means "House of God" and is numerically 503 as well as *gawrash* [גַּוְרָשׁ], and the phrase *yekhavah-da'ath* [יְחַוֵּה דַעַת].

Gawrash, a verb meaning "to drive, to thrust, to cast out, to expel, to put forth fruit." The symbolism of the Tower in Key 16, with its falling figures and toppling crown, is in agreement. Since Mars presided over the fertility of fields and herds, and the active force in reproduction, "to put forth fruit" is also understandable.

As a noun *geresh* signifies "a fruit, a product of the earth, produce." The letters of the word are clues to a deeper meaning. They are Gimel (Moon), Resh (Sun) and Shin, the Fire and Quintessence of the Alchemist and the symbol of *Prana*. Thus the word is a symbol for Moon, Sun and Fire, and since it also means "a product of the earth," it is a symbol for that most precious fruit, the Stone of the Wise, compounded by Moon, Sun and Fire from the elements composing the earth.

The phrase *yekhavah da'ath*, means "shows knowledge," from Psalm 19:2, "Night unto night shows knowledge." Note that night shows knowledge to night, while day utters speech to day. This phrase is directly associated Peh, the mouth as the organ of speech.

Some ancient Tarot Keys show the lightning-bolt issuing from the mouth of a sundisk with a human face. In Genesis says "night" is the name for darkness, and for Binah the Mother. The womb of night brings forth the day. Night, is the time we associate with generation and conception; and *da'ath*, knowledge, is known to mean what the Bible intimates when it says: "And Adam knew his wife, and she conceived."

"House of God," is part of a New Testament statement: "What, do you not know that your body is a temple of the Holy Spirit that is within you, which you have received from God? (1 Corinthians, 6:19)." Thus the tower is a symbol for the human body.

The magical power attributed to the 27th Path is: "To foresee all future events which do not depend on a superior free will, or on an all undiscernible cause." The choice of words here is subtle. No event depends on any *personal* "superior free will," because all events depend on the One Will which finds expression through every living creature. It is what excites every creature into action, and constitutes its essential life.

This One Will which seems to be an "all undiscernible cause," is an indwelling **Presence**. Its light of direct knowledge comes suddenly, like a Lightning Flash, and overthrows the whole conception of the meaning of life held previously. This perception destroys the delusion of personal autonomy and isolation. It gives both insight and foresight. Then we see truly what the SELF is, and what is the real meaning and purpose of human personality. This is an experience not only of a single person but also of whole races at certain stages of their development. It is the great influence which effects sweeping changes in the thought and work of the world.

The reciprocal path of Peh which joins Victory to Splendor, the field of desire to that of intellect. It is the "Exciting Intelligence", and it follows the Renewing Intelligence because the sense of limitation sooner or later gives way to the conviction that this limitation is not permanent. This conviction is man's chief incentive to the kinds of action which will lead to freedom. This conviction is an intuitive perception that the Spirit of man is one with the Universal Spirit, which as we have seen must necessarily succeed in carrying out the great purpose for which it projects Itself in a universe.

28th Path is *Sekhel Motba*

The 28th Path (Tzaddi, joining Netzach to Yesod) is called the Natural Intelligence because by it is perfected the nature of all things under the orb of the sun.

As a verb *Tawbah* [טָבַע, 81], means to press in, to impress, to sink. As a noun it means nature. The meanings of this word imply that nature is like the impression made on wax by a signet ring. Closely related is the occult doctrine that nature is impressed with characters written by the Hand of God. This is a figurative way of stating what is strictly true. One needs only pay close attention to events and things in order to read their inner meaning.

The second path proceeding from Netzach is Tzaddi, associated with meditation. Meditation is what carries the thought of faith into man's subconsciousness, where it begins to influence the activities of the Vital Soul. In the highest ranges of practical occultism, meditation is employed to evolve the etheric pattern of the new creature. The truth that a new organism results from the desire for new function is here in evidence. We must want to be more than we seem to be. We must dwell on our image of the new creature. Meditation transfers that image to the field of the Vital Soul or automatic consciousness, and the latter then proceeds to set in motion the activities which bring the new creature into actual manifestation. Our conscious part in this is to meditate on the image, and this image gets clearer and clearer as we meditate.

In Key 17, the Star, the nude woman kneeling is a symbol for the Ego because the Ego, though usually

termed by Qabalists the Son, is really androgyny. Meditation is a function of the Ego, which raises to the conscious level the powers of the automatic consciousness in Yesod, symbolized by the pool. He who seeks to enter the Fifth Kingdom must meditate. However much it may seem to us at first that meditation is a personal activity, when we really succeed in meditation we discover that what happens is not what we meditate, but rather that we are *meditated*.

We experience the peace of illumination during quiet meditation after the storm and conflict of our early awakenings have passed. A man in meditation surrenders himself to the indwelling *Shekinah* the "Light of Wisdom," who is the "Daughter of the Seven." He makes an appointment with Her. He seeks Her out, and to her faithful lover She unveils.

For the "building" is the secret place of the Most High. It is within the brain of the illuminated adept, and is what we call the "Adytum." In an unenlightened man it is in the same condition as the Temple at the time of David. The materials are gathered, but cannot be erected into a temple by David, the warrior and man of blood. They must wait for Solomon, whose name signifies "peaceful."

The Path of Tzaddi joins Netzach, sphere of the desire nature, to the automatic consciousness. The sudden inspiration in Key 16 is followed by the calmer influence of the Tzaddi, called the "Natural Intelligence". This path represents the gradual unfoldment of man's instinctive knowledge of truth. This knowledge begins to find expression in his thought as soon as he comes to know that he is not the bondslave of external conditions. It is the projection of Victory, which recognizes as inevitable, and this is the root of all human hopes.

29th Path is *Sakyel Mughsham*

The 29th Path (Qoph, joining Netzach to Malkuth) is called the Corporeal Intelligence because it marks out the forms of all bodies which are incorporated under every revolution of the zodiac, and is what constitutes the arrangement and the disposition thereof.

Corporeal means Incarnating. The adjective *mogashem* is derived from a verb [מגשם, 343], *gawsham*, meaning "to rain violently," or as a noun: "a hard shower." Key 18 pictures a shower of 18 Yods. Yod is 10 so $10 \times 18 = 180$, the number of degrees in a semicircle. Because the sun follows the apparent path of a semicircle from east to west during the course of a day, 180 is a symbol of the "day," or incarnation period of a personality.

As the Intelligence which "informs everybody", it is that which effects all structural transformations. It is the immediate agency of evolution. The word informs is employed in its archaic meaning, "to form, vitalize, make or inspirit."

The main work of the Corporeal Intelligence has to do with the marking out of the bodies peculiar to the 12 zodiacal types, as our text intimates when it says the Corporeal Intelligence "marks out the forms of all bodies which are incorporated under every revolution of the zodiac." Illumination is not loss of personal identity. It does not erase the special characteristics which make, say, a Taurean clearly distinguishable from a Libran. Thus the symbol of the Holy City in the Apocalypse has 12 gates and 12 foundations. Illumination does not do away with personal identity or personality. It enlightens and liberates.

The Corporeal Intelligence is that mode of consciousness which builds the physical vehicle of the soul; and it is the consciousness which has its bodily location in the back of the head, in the cerebellum and the medulla oblongata. The medulla consciousness is active at all times, even when the higher brain-centers are asleep, for it controls all the principle vital functions.

Qoph joins Netzach (the Supreme Spirit's hidden knowledge of It's limitless potentialities, which must find expression sooner or later in the perfect manifestation of Itself implied by the noun Victory) to Malkuth,

the field of desire to that of sensation. This path begins the operation of the tenth Sephirah. Malkuth is connected with man's physical body. During sleep, the desires we formulate clearly are impressed on the cell structure.

The Corporeal Intelligence act in response to desire even in the lowest forms of living organisms. All structural changes in the evolution of higher types of life from lower ones, are brought about by efforts to gratify some desire felt by the entity in whose organism repeated action directed towards some definite end brings about such changes. In man these changes take place only, or at least principally, within the range of the nervous organism. It is by the transformation so wrought--during natural sleep, that the latent powers of man find expression. The higher faculties which are hidden, or occult, in the masses of humanity, are brought forth into the supernormal powers of adepts.

Elphas Levi's states that the magical power of a possessor of the Path of Qoph is "To triumph over adversities." This is a concise summary of the entire process of embodiment which is the work of the Corporeal Intelligence. The changes in the human organism which are brought about by endeavors to overcome seemingly adverse conditions, and the great change from the natural man to the new creature, are direct consequences of the work connected with the 29th Path.

30th Path is *Sekhel Kelali*

The 30th Path (Resh, joining Hod to Yesod) is called the *Collective Intelligence* because thence astrologers, by the judgment of the stars and the zodiac, derive the perfection of their knowledge of the revolution of ruling principles.

Kellawli is derived from [כֶּלָּל, 80], *kellawl*, signifying "whole, complete." The 30th Path has to do with the completion of the Great Work in the production of the new creature, evolved from the natural man by the Life-power, working through the mental, emotional and physical activities of a human personality.

The personality is the instrument or vehicle through which the Life-power evolves the new creature. The active transforming power does not originate in the personality, though it does dwell within it. It is what Key 14 pictures as the Holy Guardian Angel, and what is shown in Key 19 as a sun with a human face. It is the one EGO, the Christos.

What the EGO utilizes to bring about the evolution of the new creature is the cosmic life-force, or *Chaiah*, seated in Chokmah. *Chaiah* is the universal radiant energy. Thus it is associated in our text with the stars and the zodiac.

Individual who posses the power of this path belong to that small minority described in our text by the term [בְּעָלֵי הַשָּׁמַיִם, 507], *baali ha-shamaim*, masters of the heavens. Do not confused them with exoteric astrologers. Besides knowing and interpreting the influences of external celestial forces, they have become masters of their *interior* stars. This mastery is one consequence of the meditation symbolized by Key 17.

These individuals know how to set about solving their problems, and has behind them a record of successes which gives them confidence. They approach their problems with joy. Their work is not labor, but, in the truest and best sense of the word, recreation.

Thus the little children in Key 19 stand with one foot in the inner circle of the fairy ring, and with one foot in the outer circle. This means that they have yet some work to do. This stage of unfoldment is but preliminary to the two which come after it, and these are connected with the 31st and 32nd Paths of wisdom.

Resh is the first path proceeding from Hod, which it joins to Yesod, thus being the link between the Sphere of Mercury and the Sphere of the Moon, and between intellect and the automatic consciousness. In Key 19 the boy is on the side corresponding to Hod and the girl on the side corresponding to Yesod, but they are

linked by their joined hands.

Resh, is the compliment or reflection of the Natural Intelligence. It is called the Collecting Intelligence because this path corresponds to the Sun, which is a great storage battery of cosmic and spiritual fire. This fire is collected in the sun, and there lowered in vibratory speed so that it becomes perceptible to our gross senses in the phenomena of light and heat. The cosmic energy itself is actively manifest in the Absolute or Perfect Intelligence of Hod. The fundamental principle of the universe is consciousness. Activity, whether *fine* or *gross*, is *inherently mental* in quality. This fact is the scientific basis of magic.

Resh carries the patterns arranged by intellectual activity (which is cosmic energy collected or focussed as solar force) to the level of the Vital Soul. In Key 19 the sun at the top of the picture stands for the Hod. The Sphere of Mercury is to be carefully distinguished from the planet Mercury. Our day-star is a concentration of the Life-power's self-conscious energy, and that self-conscious energy is the Mercury of the Sages concentrated in the EGO in Tiphareth.

The Path of Resh represents the early stages of man's conscious awareness that he is actually becoming a new creature. It is a picture of something which occurs at both conscious and subconscious levels. The two children symbolize these two modes of personal consciousness, and the sun behind them is like the angel of Key 14. They are personal embodiments of what some have called the "solar consciousness." Their dance in a fairy ring is a manifestation at the personal level of the conscious energy of the EGO in Tiphareth, symbolized by the daystar overhead with its human face.

31st Path is *Sekhel Temidi*

The 31st Path (Shin, joining Hod to Malkuth) is called the Perpetual Intelligence because it rules the movements of the sun and moon according to their constitution, and perfects all the powers of all the revolutions of the zodiac, and the arrangement (or, form) of their judgments.

Temidiy [תמיד, 510] is derived from [תמיד, 454], *tawmeed*, signifying continuance, or indefinite extension, and referring often in ancient Hebrew to perpetual time.

The Path of Qoph is that which is chiefly concerned with the corporeal pattern and form, it carries our desire nature into the sphere of physical sensation. Its opposite, the 31st Path of Shin, carries into the physical organism the influences descending from Kether through the side of Geburah on the Tree. The whole series of paths on the pillar of severity has to do with activities which, from the ordinary human standpoint, are concerned with the future, with the elaboration of the consequences of what the One Self knows itself to be, into forms of expression which make that knowledge manifest in actual states of realization.

It is for this reason that Key 20, corresponding to the 31st Path, is a symbol of a state of human personality which is "future" for the majority of human beings.

Note that the last word of the text concerning the 31st Path is "judgments," in this instance written [משפטים], *mishpatiham*, "their judgments." The "revolutions of the zodiacs" are the cycles of successive incarnation. The form of their judgments is a veiled reference to the completion of the incarnation cycle by the "resurrection" from what St. Paul calls "the body of this death" (Romans 7:24). This is the "natural body," the body of sin, dominated by the vital soul, and not yet perfected by the EGO.

Yet this "body of death" or "natural body" is the seed of the spiritual body, which is finally evolved from it at the completion of the creative process. What raises it from corruption is the spiritual fire which enters it through the channel of the 31st Path.

The angel in Key 20 is Gabriel, whose name is from the same root as Geburah. Gabriel is the Divine

Presence manifested as the irresistible strength of volition. He is the sounder of the last trump, and Key 20 shows that sound is active in the process which raises the new creature from the "death" of the delusion of separateness.

Seven rays extend from the angel's trumpet to show that the powers of all seven Elohim are combined in the sound which brings the resurrected figures from their floating stone coffins. This sound is also the Voice, and by Greek geometry the word for "voice" or "sound" is equivalent to the Greek for "the full (exact, perfect) knowledge," and the Greek for "Robe of Adonai." The Robe of Adonai is the perfected body of the new creature, and it is because he has this new body that he enters into the perfect knowledge of his Divine Selfhood.

Until this final consummation of the Great Work, we seem to be directing it from the field of intellectual, self-conscious awareness. We make plans. We concentrate. We study and practice. Yet the final liberation is a call from above. It is not our work, but the operation of the fiery Spirit.

The Perpetual Intelligence is the spiritual power which, without a single break in the continuity of its operation, works to perfect every one of its personal vehicles by providing each of them with the spiritual body of the new creature. This is a body incarnate on the physical plane, but it is freed from the necessity for birth and death. It begins its final incarnation as a natural body, but ends that incarnation transmuted into the immortal vehicle of the liberated adept. This is the completion of the evolutionary cycle, hence its title, the Judgment.

The Perpetual Intelligence is even now at work within you. It is even now preparing you for the event pictured by the symbols of Key 20. Perhaps that event may seem to you to be far in the future, but remember that both "past" and "future" are terms belonging to our natural time-sense. They are meaningless to a human being who has risen from the grave of error into the light of the acute knowledge which is the inevitable fruition of the Great Work whereby the EGO brings its personal vehicles to completion as new creatures.

32nd Path is *Sekhel Ne'evad*

The 32nd Path (Tav, joining Yesod to Malkuth) is called the Serving, or Administrative Intelligence, because it directs all the operations of the seven planets, and concurs therein.

Tav is called the Serving, aiding, or Administrative Intelligence. It is the only path proceeding from Yesod, joining the Sphere of the Moon to the Sphere of the Elements, the field of the automatic consciousness and the vital soul to the field of sensation and physical embodiment. Without the propagative power of Yesod the Resplendent Intelligence of Malkuth would be barren and unproductive.

The number of the letter-name Tav [ט] is 406. Note that the theosophic extension of 7 is 28, and 406 is the extension of 28. Hence, Tav may be considered as being the full development of what is symbolized by Zain, Key 6, the 17th Path of wisdom. Furthermore the extension of 6 is 21 the number of the Tarot Key for Saturn.

Thus the 32nd Path is in some sense a development of ideas related to the 17th Path. The Path of Zain conducts the Holy influence from Binah, the Sphere of Saturn, down to Tiphareth, the Sphere of the Sun, and seat of the EGO. This suggests a strong Saturn influence at work in the 17th Path.

Right discrimination, pictured by Key 6, uses this same Saturnine quality to make the sharp distinctions between conscious and subconscious functions which are necessary to the establishment of balance in our personal manifestations of these two modes of consciousness. You will remember, the occult dictum that "above" and "within" are synonyms. The highest is the innermost. Consequently, the mountain peak in the background of Key 6, and the angel to whom the woman lifts her eyes, are both symbols for the *central*

Spiritual Presence. Union with that Presence is the goal of the path of spiritual attainment, and this goal is the mountain peak. The top of the mountain is comparable to the single point at the apex of a pyramid, and this is the *Central Point*.

In the Cube of Space, the Central Point is innermost. This is the "Palace of Holiness in the midst," the Holy Temple that stands at the center. *The Book of Formation* says this temple or palace corresponds to Tav.

Hence our text says the Administrative Intelligence "directs all the operations of the seven planets, and concurs therein." This central presence is what is symbolized in the Apocalypse by the "Lamb." The Lamb is the light of the city. The Lamb, in union with the Lord God Almighty, constitutes the inner temple of the city. The throne of God and the Lamb is in the midst of this crystalline, golden cube, and from the throne flows the river of living water, clear as crystal.

The Holy City is also called the Bride, the Qabalistic term for Malkuth, the tenth Sephirah. She is the world-dancer of Key 21. Her Hebrew name [קַלּוּלָה, 55], *Kallah*, is usually translated "bride" or "spouse," but means literally "crowned one," and is derived from the root [קַלּוּלָה, 50], *kallal*, complete, perfect.

The foundation of this city is the vital soul seated in Yesod, when that vital soul is impregnated with the power of the EGO. The EGO is the "Lamb." The EGO is the LIGHT. The EGO is manifested in the Administrative Intelligence, the greatest of all because it is the servant of all.

Appendix 16

A Dissertation Concerning the 32 Paths of Wisdom

The Paths of the Tree of Life indicate the order of manifestation after the primary expression of the powers of the ten Sephiroth, indicated by the Lightning-flash. Not until the paths of the letters are manifested, do the Sephiroth come into full expression. Prior to this they are like unrealized ideas. The paths of the letters make them active.

Now consider the order of the paths. The 11th (Aleph, א) brings *Wisdom (Chokmah)* into activity; the 12th (Beth, ב) *Understanding (Binah)*; the 13th (Gimel) *Beauty (Tiphareth)*, and thus *Beauty* begins to be active before *Mercy (Chesed)* and *Severity (Geburah)*, as in creation the beauty of the visible nature was manifest before creatures to whom mercy or severity could be shown, were brought forth.

Beauty being established, the 14th Path (*Daleth*) unites *Wisdom* and *Understanding*; and the central point of this path, where it crosses the 13th is Da'ath (דע) in Hebrew Knowledge, for all knowledge has its root in the Divine contemplation of the perfect primal *Beauty*. *Wisdom* or *Chokmah*, which includes the idea of skill in construction, then projects the path of Constituting Intelligence (15th Path) *Heh* (ה), and through this path *Beauty*, which hitherto has received only the influx of power from Kether, the Crown of Primal Will, now receives the influence of the Illuminating Intelligence of the Father *Chokmah*

The Constitution Intelligence is the letter *Heh* "with which creation took place", hence the next path, that of *Vau* (ו) joins *Wisdom* to *Mercy*, for when creatures begin to exist, *Mercy* becomes active. This is the passage of *Wisdom (Chokmah)* into the self-impartment of the Divine Spirit, through the self-contemplation of His (or Its) limitless possibilities as an eternal Spirit of Life.

Mercy (Chesed) is prior to *Severity (Geburah)* for reasons that will appear shortly. Do not confuse this sequential manifestation of the Sephiroth with the instantaneous one indicated by the Lightning-Flash, which brings them all into potential, but not actual expression simultaneously.

The path of *Zain* (ז), Disposing Intelligence, suggest by its name the operation of the Supernal *Understanding (Binah)* in separating the creatures produced by the Constituting Intelligence, into species, classes etc. The fundamental separation is that of sex, and hence this path is indicated by *Zain* the Sword, and by the Lovers in the Tarot.

Not until this separating influence has projected the power of *Understanding* into *Beauty*, can the activity of *Severity* be manifest through the path of *Cheth* (ח), which, setting off definite fields of operation, and so in a sense circumscribing the expression of the Divine *Understanding*, brings into actual effect the Radical Intelligence of *Geburah*.

At this point the Spirit's full realization of Its power as a limitless self-impacting Principle, manifested in limited forms of expression, unites the potencies of *Mercy* to those of *Severity*, through the path of the letter *Teth* (ט), called Intelligence of all Spiritual Activities. This path is also called Intelligence of the Secret, because the Great Arcanum is based upon the fact that Limitless Life expresses Itself in limited forms. Therein you may discover the great secret of all magical operations, ----- the Arcanum of the equilibrium between *Severity* and *Mercy*.

Notice also that this path crosses that of *Gimel* (ג). The central point of the magical equilibrium is the realization that the Primal Will (*Kether*) eternally projects Itself in *Beauty*; and this path of *Gimel* being that of the Uniting Intelligence, the implication is that the true equilibrium can only be attained by means of the conscious self-identification of the personal will with the Universal Self-direction toward the

realization of *Beauty*.

Now comes the path of *Yod* (י), which carries the influence of *Mercy* into *Beauty*, concentrated in a complete realization of the cosmic purpose, indicated by the name of the path, Intelligence of Will. In the Tarot, the Hermit, far from being a conventional type of Prudence, illustrates the masculine expression of Beneficence, (*Chesed*) through *Yod*, the letter of the Father. This will be clear upon examination of the 9th Key of the Tarot.

The path of the letter *Lamed* (ל) by contrast, shows a feminine influence (that of the ruler of the sign Libra, the feminine planet Venus) in the activity of Faithful Intelligence which perfects or completes the static manifestation of *Beauty* through equilibrated Action or Work (Karma).

But this static manifestation of *Beauty* is not effected until after the path of *Kaph* (כ), or Conciliating Intelligence has brought *Netzach* into activity by the projection of the influence of *Chesed*, because Karma does not begin to operate until the turning wheel of manifestation has brought into the field of the unfolding universal self-consciousness a definite conception of the victorious end towards which IT's self-impartment is directed. Karma cannot be supposed to work without an objective, and the nature of Spirit assures us that IT's objective must be the successful outcome of the creative process. Hence *Lamed* and the 22nd path follow *Kaph* and the 21st.

The static expression of *Beauty* being realized, *Severity* projects *Splendor* (*Hod*) to balance *Splendor* (*Netzach*), (you will observe that Understanding, *Severity*, and *Splendor* are as it were reflections of Wisdom, *Mercy*, and Victory respectively). The path connecting *Severity* and *Splendor* is that of the letter *Mem* (מ), called "Stable Intelligence". The fixed unwavering self-contemplation proceeding primarily from the supernal Understanding is associated with *Mem* because of the Creator's self-understanding. This path refers to a condition of human consciousness.

In the Tarot it is the Hanged Man, i.e. the "suspended mind", or *manas* in the state of freedom from activity which the Hindus compare to a perfectly calm body of water. When this state of the universal consciousness finds expression through a personal form, complete realization of the divine *Splendor* is made actual.

The path *Num* (נ) is the first manifestation of the dynamic or projective aspect of *Tiphareth* (as contrasted with the static or receptive aspect). It is called "Imaginative Intelligence" because the primary activity of *Beauty* works through imagination in bringing about new modes of expression. This involves the passing away of the forms which are supplanted by those which imagination calls into existence.

The passing away of supplanted forms is indicated in the symbol of the Tarot Key entitled Death, and the fact that the new forms are developments of the old is suggested by the nature of the harvest gathered by the Reaper in the picture. The result is the perfection of *Netzach*, for through the transformations wrought by the power of *Beauty*, the final Victory is attained.

The path of the "Intelligence of Probation or Trial", attributed to the letter *Samekh* (ס), because it signifies the testing of the ideas and innovations suggested by the imagination. It joins *Beauty* to *Foundation* (*Yesod*), because only by experiments, trials and tests can the harmony of *Tiphareth* become actualized in term *Foundation*. (Note that *Foundation* is the propagative Sefirah, and you will have a clue to many problems.)

The path of *Ayin* (א) is perhaps the most obscure of all. The "Renewing Intelligence" completes the dynamic expression of *Beauty* by union it to *Splendor*, on the side of the Pillar of *Severity*. The key to the mystery of this path is the word limitation, and it is the Renewing Intelligence because it is the source of human consciousness of limitation, incompleteness, lack and bondage. Our sense of bondage, after all, is the reflection of our intuitive knowledge of the freedom of THAT, which is the essential SELF of every

man. When we consider the small extent of our personal achievements, the essential perfection of the ONE SELF seems to be an unattainable ideal. Millions of people personify this ideal as an external deity. It's opposite, to which they attribute limitation of all kinds, they personify as a hostile and malignant agency, the devil. The sense of bondage however, is what drives man to seek freedom, and thus it leads at last to the *Splendor* which is the consequence of the strict justice of *Geburah* and the outcome of the dynamic impulse toward *Beauty* which pervades creation, while at the same time, this *Splendor* is the reflection of *Victory*.

The path of Peh (פ) which joins *Victory* to *Splendor*, is analogous to the paths of *Daleth* and *Teth*. It is the "Exciting Intelligence", and it follows the Renewing Intelligence because the sense of limitation sooner or later gives way to the conviction that this limitation is not permanent. This conviction is man's chief incentive to the kinds of action which will lead to freedom.

It originates in an intuitive perception that the Spirit of man is one with the Universal Spirit, which as we have seen must necessarily succeed in carrying out the great purpose for which it projects Itself in a universe.

This intuitive perception comes suddenly, like a Lightning Flash, and usually overthrows the whole conception of the meaning of life held previously by him to whom it comes. This is an experience not only of a single person but also of whole races at certain stages of their development. It is the great influence which effects sweeping changes in the thought and work of the world.

This sudden inspiration is followed by the calmer influence of the next path, attributed to the letter *Tzaddi* (צ), and called the "Natural Intelligence". This path represents the gradual unfoldment of man's instinctive knowledge of truth. This knowledge begins to find expression in his thought as soon as he comes to know that he is not the bondsman of external conditions. It is the projection of *Victory*, which recognizes as inevitable, and this is the root of all human hopes.

The next path is that of the letter *Qoph* (ק), in Hebrew the meaning of this word *Qoph* is somewhat obscure. Usually it is given as "the back of head", and there is no doubt that this agrees with the occult tradition and also with certain facts. But the word *Qoph* is also translated "ape" and is apparently of obscure foreign derivation. If it means "ape" in the alphabet, it suggest a knowledge of evolution of the part of Qabalists antedating the theories of Darwin by some thousands of years; for the path of *Qoph* is that of "Corporeal Intelligence", "which informs everybody in the influence of the solar orb, and is the root of all growth". (The word informs as here employed, has the sense, now obsolete, of to form, vitalize, make or inspirit.")

The Corporeal Intelligence is that mode of consciousness which builds the physical vehicle of the soul; and it is the consciousness which has its bodily location in the back of the head, in the cerebellum and the medulla oblongata. In the later particularly, consciousness is active at all times, even when the higher brain-centers are asleep, for it controls all the principle vital functions.

Now the letter *Qoph* is associated with sleep in the Book of Formation, as a hint that the Corporeal Intelligence remains active even in sleep. Furthermore, as the Intelligence which informs every body, it is that which effects all structural transformations, and thus it is the immediate agency of evolution. Hence the Corporeal Intelligence unites the "Occult Intelligence" of Netzach (the Supreme Spirit's hidden knowledge of It's limitless potentialities, which must find expression sooner or later in the perfect manifestation of Itself implied by the noun *Victory*) to the "Resplendent Intelligence" of *Malkuth*. Note also that this path corresponds to the zodiacal sign Pisces, which rules the feet, and that it ends in *Malkuth*, wherein are placed the feet of the Grand of Macrocosmic Man.

This Corporeal Intelligence act in response to desire even in the lowest forms of living organisms. All structural changes in the evolution of higher types of life from lower ones, as Lamark long ago pointed out, are brought about by efforts to gratify some desire felt by the entity in whose organism repeated action

directed towards some definite end brings about such changes. In man these changes take place only, or at least principally, within the range of the nervous organism. It is by the transformation so wrought--during natural sleep, be it observed-- that the latent powers of man find expression. In other words, the higher faculties which are hidden, or occult, in the masses of humanity, are brought forth into the supernormal powers of adepts, who have become partakers in the Heavenly Kingdom (*Malkuth*) through powers constitute Resplendent Intelligence of *Malkuth*.

The next path, that of Resh (ר), is the compliment or reflection of the "Natural Intelligence." It is called the "Collecting Intelligence" because this path corresponds to the Sun, which is a great storage battery of cosmic and spiritual fire. This fire is collected in the sun, and there lowered in vibratory speed so that it becomes perceptible to our gross senses in the phenomena of light and heat. The cosmic energy itself is actively manifest in the "Absolute or Perfect Intelligence" of *Hod*. The sages unite to declare that the fundamental principle of the universe is consciousness, whence it follows that the activity, whether fine or gross, is inherently mental in quality. This fact is the scientific basis of magic.

The cosmic energy is collected or focussed as solar force in the path, of *Resh*, which communicates this force to the ninth Sephira, *Yesod*.

The next path is that of *Shin* (שׁ), joining the Perfect Intelligence of *Hod* to the Resplendent Intelligence of *Malkuth*. It is called "Perpetual Intelligence", because it is subject to no change. Thus it is in direct contrast to the ever-changing Corporeal Intelligence attributed to the letter *Qoph*. Since this path is attributed to Shin, the third Mother-letter, it also refers to the Primal Fire. This path communicates the influence of the Pillar of *Severity* to *Malkuth*. The Perpetual Intelligence is that which persists through the series of incarnations, as the spark, or core of individuality around which the successive personalities are built.

The last path is that of the letter *Tau* (ט) the "Administrative or Assisting Intelligence", which communicates to the Resplendent Intelligence of *Malkuth*, the propagative power of *Yesod*, without which the Resplendent Intelligence would be barren and unproductive.

Compare this path with that of the Renewing Intelligence, also with those of *Lamed* (ל) and *Tzaddi* (צ). The point in common is the influence of Saturn, which rules Capricorn (*Ayin*) and Aquarius (*Tzaddi*), and is exalted in Libra (*Lamed*). The power of Saturn is double. Thus the alchemists say that their Saturn (Lead) is corrosive externally and Lunar internally. That is, it combines the from-destroying power of corrosion with the perfect reflecting power of that which the alchemists call the Moon.

The corrosive power predominates in Capricorn, or the Renewing Intelligence, the reflective power is active in the Natural Intelligence. This Natural Intelligence through the letter *Tzaddi*, is associated with meditation. The path of *Lamed* represents the equilibration of the corrosive and reflecting powers.

These correspondences are shown in the Tarot, where Justice, a female figure, like her who kneels in the picture called The Star, holds the sword of corrosion and the scales which symbolize the equilibrium attained through meditation. *Lamed* moreover corresponds to Work and is thus allied to the Assisting Intelligence, which as pictured by The World in the Tarot, represents the perfection of the Saturnine nature.

The Assisting Intelligence completes the sequential manifestation of the Sephiroth. In human consciousness it is expressed as self-identification with the Supreme Spirit, and as the dedication of the whole personal life to the furtherance of the Great Work.

Received in 1919, by the two Brothers who first recovered the outline of the Book of Tokens.

Appendix 17 – Tarot Attributions

#	Key	Letter	Meaning	#	color	note	Astrology
1	The Fool	Aleph (א)	bull	1	Yellow	E	Uranus
2	The Magician	Beth (ב)	house	2	Yellow	E	Mercury
3	The High Priestess	Gimel (ג)	camel, foot	3	Blue	G #	Moon
4	The Empress	Daleth (ד)	door	4	Green	F #	Venus
5	The Emperor	Heh (ה)	window	5	Red	C	Aries
6	The Hierophant	Vav (ו)	hook	6	Red-Orange	C #	Taurus
7	The Lovers	Zaïn (ז)	sword	7	Orange	D	Gemini
8	The Chariot	Cheth (ח)	fence	8	Orange-Yellow	D #	Cancer
9	Strength	Teth (ט)	clay basket (serpent)	9	Yellow	E	Leo
10	The Hermit	Yod (י)	open hand	10	Yellow-Green	F	Virgo
11	The Wheel of Fortune	Kaph (כ, ך)	palm of hand	20	Violet	A #	Jupiter
12	Justice	Lamed (ל)	ox goad	30	Green	F #	Libra
13	The Hanged Man	Mem (מ, ם)	water	40	Blue	G #	Neptune
14	Death	Nun (נ, ן)	fish	50	Blue-Green	G	Scorpio
15	Temperance	Samekh (ס)	prop, thorn	60	Blue	G #	Sagittarius
16	The Devil	Ayin (ע)	eye	70	Blue-Violet	A	Capricorn
17	The Tower	Peh (פ, ף)	mouth	80	Red	C	Mars
18	The Star	Tzaddi (צ, ץ)	fish-hook	90	Violet	A #	Aquarius
19	The Moon	Qoph (ק)	sun at the Horizon	100	Violet-Red	B	Pisces
20	The Sun	Resh (ר)	head	200	Orange	D	Sun
21	Judgement	Shin (ש)	tooth	300	Red	C	Pluto
22	The World	Tav (ת)	mark	400	Blue-Violet	A	Saturn

Appendix 18

The Correlation Between Sound and Color

Many esoteric schools have correlations between sound and color in their healing and chanting work. This appendix is based on the *premise* that the correlation between sound and color is based on the octave. That is, we double the frequency of sound to the point that it becomes light. Before we begin, sound, octave and light must be defined.

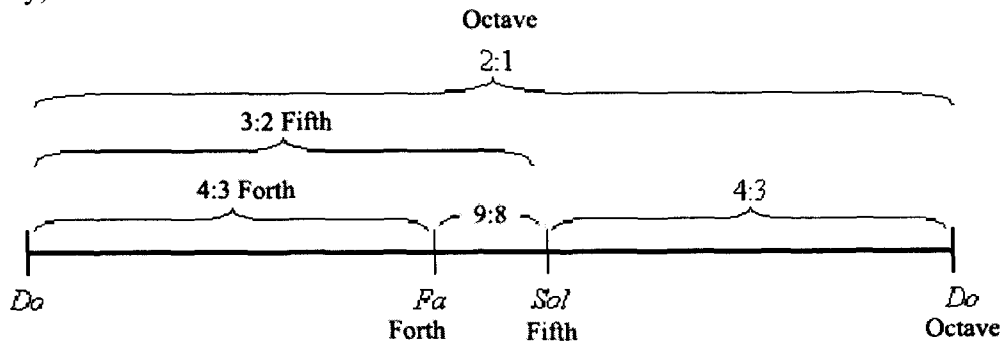
Sound is vibration carried through the Air. The frequency range that a human ear can perceive is between 20 to 20,000 vibrations per second (or Hertz, abbreviated Hz). The human ear is very sensitive to changes in pitch (change in frequency). Music theory describes sound with great detail. I will cover the very basics.

The Pythagorean Music Scale

Pythagoras (570-504 BCE) is credited with discovering that vibrating strings of whole number proportion create “pleasing” sounds. Consider a single-stringed instrument with a moveable bridge, Pythagoras noted that a string’s pitch (frequency) was exactly one octave lower than the pitch created when the string’s length was halved. For example, if string produced an A (440 Hz) note when plucked, then moving the bridge to the midpoint of the string would cause it to produce the A one octave above (880 Hz). He then experimented with the sounds produced when two strings of different lengths are plucked simultaneously (a cord). He discovered that when two strings of length L and $(2/3)L$ are plucked together, the resulting frequencies created a pleasing sound.

Additionally, strings that are one octave apart that are played together are also create a pleasing sound. For example, if a pitch of 440 Hz simultaneously with a pitch of 880 Hz, the result is a smooth blending of the two. Therefore in the Pythagorean scale, the octave (2:1 ratio) and the 5th (3:2 ratio) create pleasing sounds.

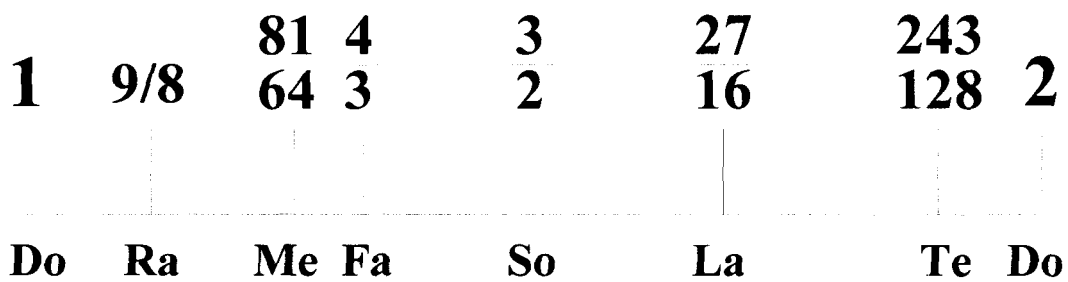
Pythagoras built his musical scale around the octave, firstly, and then around the fifth (3:2). Additionally, the interval from the fifth to the octave is the ratio 4:3. The ratio from the fourth to fifth is 9:8.



So what does this all mean? I will skip a few steps and show the whole numbers that from the notes for a seven step scale.

Pythagorean Whole Number Seven Step Scale							
C	D	E	F	G	A	B	C
1	9/8	81/64	4/3	3/2	27/16	243/128	2

If you look at the scale visually you can see that the steps.



Pythagorean 7 Step Scale

The Pythagorean scale creates pleasing harmonies. But is not suited for modern instruments, like a keyboard. Changing Keys (which is too long to explain here) requires retuning the musical instrument. To play in any Key without retuning your instrument, the “Equal Tempered Scale” was developed.

The Equal Tempered Scale

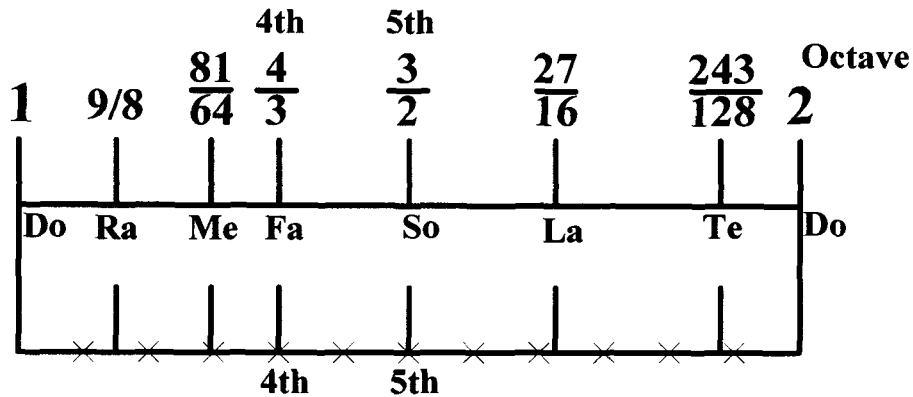
There were several tempered (meantone, just tone, well tempered, etc) scales that were developed over the centuries as a compromise between harmonic balance and ease of play. The true equal temperament scale was not available to musicians had to wait until the 1870’s until the development of scientific tuning and measurement.

The equal tempered scale was developed for keyboard instruments, so that they could be played equally well (or badly) in any key. It is a compromise tuning scheme. The equal tempered system uses a constant frequency multiple between the notes of the chromatic scale. The chromatic scale is divided into 12 equal steps, which is the number of piano keys between octaves. On the equal-tempered scale, each semitone is equal to the twelfth root of 2 or 1.059.

The following table shows a comparison between the Pythagorean scale and the temperate scale:

Note	Temperate Scale		Pythagorean Scale		% Difference
	Power	Value	Fraction	Value	
C	$2^{0/12}$	1.000	1/1	1.000	0
C#	$2^{1/12}$	1.059			
D	$2^{2/12}$	1.122	9/8	1.125	6
D#	$2^{3/12}$	1.189			
E	$2^{4/12}$	1.260	81/64	1.266	0.44
F	$2^{5/12}$	1.335	4/3	1.333	0.15
F#	$2^{6/12}$	1.414			
G	$2^{7/12}$	1.498	3/2	1.500	0.13
G#	$2^{8/12}$	1.587			
A	$2^{9/12}$	1.682	27/16	1.688	0.36
A#	$2^{10/12}$	1.782			
B	$2^{11/12}$	1.888	243/128	1.898	0.55
C	$2^{12/12}$	2.000	2/1	2.000	0

We can also visually compare the scales.



The “x” marks show the 12 equal division. Note that the 4th and 5th are good approximations of each other on both scales. However, the human ear can still discern the difference.

Pythagoras scale is based on whole numbers, the equal tempered scale is based on the irrational number $2^{1/12}$. In Pythagorean times they knew the existence of irrational numbers, but they kept this knowledge secret from the general public. They felt the average human mind was not yet developed enough to handle the concept that a number could not be precisely defined.

Fabre D’Olivet (1767-1825) in his book *The Secret Lore of Music*, had nothing but contempt for “modern” music. He was a firm believer the Pythagorean mode of music. However, without the different tempered scales, we would be without the music of Bach (1685-1750), Mozart (1756-1791) Beethoven (1770-1827) and Chopin (1810-1849).

Musical Pitch Standard

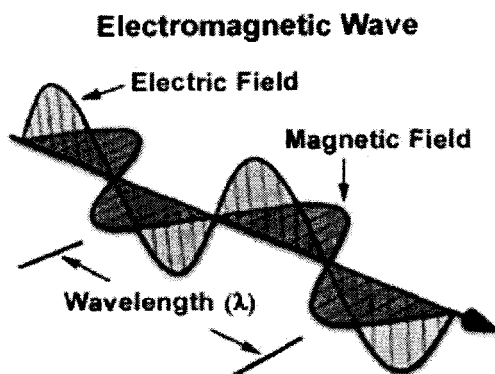
There are two accepted musical pitch standards, the American Standard pitch, which takes A in the fourth piano octave (A4) to have a frequency of 440 Hz, and the older International pitch standard, which takes A4 to have the frequency of 435 Hz. The following table is the frequency based on the American Standard Pitch.

Notes	Frequency (octaves) of the American Standard Pitch				
A	55.00	110.00	220.00	440.00	880.00
A#	58.27	116.54	233.08	466.16	932.32
B	61.74	123.48	246.96	493.92	987.84
C	65.41	130.82	261.64	523.28	1046.56
C#	69.30	138.60	277.20	554.40	1108.80
D	73.42	146.84	293.68	587.36	1174.72
D#	77.78	155.56	311.12	622.24	1244.48
E	82.41	164.82	329.64	659.28	1318.56
F	87.31	174.62	349.24	698.48	1396.96
F#	92.50	185.00	370.00	740.00	1480.00
G	98.00	196.00	392.00	784.00	1568.00
Ad	103.83	207.66	415.32	830.64	1661.28

Sound is vibration in Air. When it is a pure tone, it can be described as a *Note* that can be played on a musical instrument. An Octave is a doubling (or halving) of a musical Note.

Frequency of Light vs. Perceived Color

Light is an electromagnetic Wave, which is a coupling of an electric and magnetic field. Light can also be described as a discrete particle having zero mass, no electric charge, and an indefinitely long lifetime.



The only thing you need to understand for this paper is light is a wave or vibration that we perceive with our eyes and sound is a wave that we perceive with our ears.

Visible Light Wavelength and Perceived Color		
Wavelength Range (nanometers) 10^9	Frequency in Terahertz (10^{14})	Perceived Color
340-400	8.8 – 7.5	Near Ultraviolet (UV; Invisible)
400-430	7.5 – 6.9	Violet
430-445	6.9 – 6.7	Blue-Violet
445-482	6.7 – 6.2	Blue
482-500	6.2 – 6.0	Blue-Green (Cyan)
500-538	6.0 – 5.6	Green
538-560	5.6 – 5.3	Yellow-Green
560-595	5.3 – 5.0	Yellow
595-620	5.0 – 4.8	Yellow-Orange
620-645	4.8 – 4.6	Orange
645-690	4.6 – 4.3	Red-Orange
690-730	4.3 – 4.1	Red
Over 730	less than 4.1	Near Infrared (IR; Invisible)
Frequency = $C/\text{wavelength}$ or $\text{Wavelength} = C/\text{Frequency}$ where C = The speed of light 299,392,458 meters / second		

The Correlation of Sound to Color

Esoteric schools state there is a correlation between sound and color. If we double the frequency of sound by a factor of 40 to 41 octaves, we have a correlation between sound and color. The following table shows the results of this logic:

Note	Frequency (Hz)	multiplied by the octave		Frequency in Terahertz (10^{14})	Color
C	261.62	x	2^{41}	5.7	Green
C#	277.18	x	2^{41}	6.1	Blue-Green
D	293.67	x	2^{41}	6.5	Blue
D#	311.13	x	2^{41}	6.8	Blue-Violet
E	329.63	x	2^{41}	7.2	Violet
F	349.23	x	2^{41} or 2^{40}	3.8	Red-Violet ¹
F#	369.99	x	2^{40}	4.1	Red
G	392.00	x	2^{40}	4.3	Red-Orange
G#	415.30	x	2^{40}	4.6	Orange
A	440.00	x	2^{40}	4.8	Yellow-Orange
A#	466.16	x	2^{40}	5.1	Yellow
B	493.88	x	2^{40}	5.4	Yellow-Green

¹ near Ultra-Violet if multiplied by 2^{41} and near Infrared if multiplied by 2^{40} .

In Paul Case's Work, *Correlations of Sound and Color* (1931), as well as *The Highlights of the Tarot* (1931), the following is a summary of the correspondence between sound and color:

Note	Corresponding Color	Color Complement
C	red	green
C#	red-orange	green-blue
D	orange	blue
D#	yellow-orange	blue-violet
E	yellow	violet
F	green-yellow	red-violet
F#	green	red
G	blue-green	red-orange
G#	blue	orange
A	blue-violet	yellow-orange
A#	violet	yellow
B	red-violet	green-yellow

Using the well tempered chromatic scale, note that the *color complement appears to correspond* to the sound and color correlation used by Paul Foster Case.

Please be aware that color is subjective, and my choice of frequency and wavelength may differ from others. Additionally, the frequency of notes change depending on which standard you use. I hope this simulates thought and discussion. Perhaps a more musically trained individual may add to this work.

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