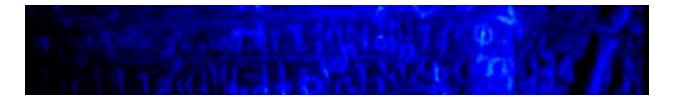
## WINKLER WORD ART INTERNATIONAL

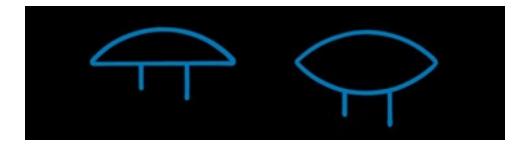
Translation & Decryption of Rare & Ancient Languages



## SIGNALGLYPH RESEARCH PROJECT



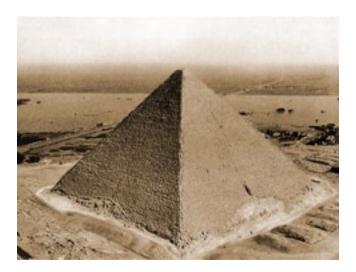
As per the Committees request, these reports will contain as little scientific/ technical language as possible. During the past Quarter, we've learned a great deal about their approach to mathematics. Some of the information has profound implications to the history and development of our own mathematical concepts. One major difference between our approach and their's, is that they don't use *pi* for calculations involving circles (they have no word for the 'diameter'). When they talk about the linear measure across a circle, they use the plural of the word for 'radius'. Their name for the tool used for drawing circles is 'radial-arc-marker'. This gives a clue to their method of calculating the radius. They use two numbers which have a ratio of unified correspondence (two integers differing by a factor of unity). The numbers are called the *trace* and the *trac*. To find the radius, they\_divide 1/6 of a circle's circumference by 22.1875399 (the *trace*) and then multiply that result--click on the formula to view a comparison by 21.1875399 (the *trac*) to the use of *pi*. For calculations which do not require extreme accuracy, they use rounded off versions: 22.1875 or 22 3/16ths (*trace*), 21.1875 or 21 3/16ths (*trac*)--*their fractions are the same as ours*. When they speak of the whole numbers of the *trace* and *trac;* they use the terms: *bow* (22) and *band* (21). Calculations using only the whole numbers are as accurate as a 3.14 value of *pi*. At the end of their description of the process for calculating the radius, there was a notation: "1/6th of perimeter, 60 degrees; Radial angle, defining orientation for two-dimensional space, 90 degrees; arc degree ratio 60 to 90 reflects (the symbol shown below left)".



A member of our team, who is an expert in reading Egyptian hieroglyphics, noted that their symbol was very similar to the hieroglyph for the fraction, 2/3rds (above right). One of the greatest achievements of ancient Egyptian mathematics was their ability to find 2/3rds of any number, whether integral or fractional--no one knows why this was so important that they would make it a foundation of their entire system of mathematics. Consequently, when we asked about the meaning of the symbol, we also asked about the possibility of any connection to the Egyptian hieroglyph. They replied that their symbol represents the elemental relation of the numbers, '2' and '3'--a relation which is connected to the patterning of many mathematical processes. They classify '2' and '3' and their sum of '5' as elemental numbers--numbers which are prime but not part of the regular class of primes (they provided a description of the system of prime distribution which will be presented later in this report). The reason '2', '3', and '5' are considered to be in a class by themselves is that they are not contained in the cycle which orients the distribution of primes and they can be used in

combination to express all larger numbers. Despite affirming that their symbol can be used to express the fraction 2/3rds, they declined to discuss any connection to the hieroglyph because it would violate their communication guidelines. But they did mention: use of their symbol would be consistent with the viewpoint that '7' and '11' were the initial integers in the class of primes, rather than '2', '3', and '5', which their symbol defines as a separate group of *elemental numbers*. The following enigmatic statement was also included with their remarks:

"Since 280/440 reduces to 7/11, it reflects the ratio of the initially occurring primes. If 440 is one side of a square, 440 multiplied by 4 yields the square's perimeter of 1760. If this 1760 square perimeter is reshaped into a circle of the same perimeter, what is the radius of that circle using the *bow* and *band*? Since 1/6th of a circle with a perimeter of 1760 would be 293 1/3rd; and dividing this by 22 (*bow*) would result in 13 1/3rd; multiplying this result by 21 (*band*) will give a radius of 280."

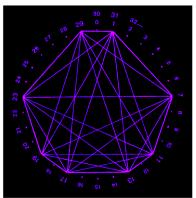


We believe they were trying to tell us (by using only mathematical information) that their symbol and the hieroglyph are connected: In Egyptian cubits, 280 is the height of the Great Pyramid; 440 is the measure along one side of its base; and 1760 is the perimeter of the Pyramid's base. Their calculations show the relationship between the height and base as a reflection of the primes, '7' and '11'. Also, If the perimeter of the square at the base of the Pyramid is thought-of as the perimeter of a circle; the height of the Pyramid is the radius of that circle, when calculated using the *bow* 

and the *band*. There are many theories about the mathematical basis of the Pyramid of Cheops but these calculations have an exact correlation to its most basic dimensions--but even if our assessment is true, the circumstances of the connection are unknown.

When we began to discuss our philosophies concerning mathematics, a profound difference was revealed in our methods of conceptualizing mathematical phenomena. Mathematics may be the universal language but expression of mathematical concepts in the form of algebraic symbolization is not universal. To those with whom we are communicating, abstract symbolization of the logic behind particular mathematical concepts is not considered advantageous. To paraphrase their attitude toward such an approach: Nature's methodologies will always transcend the logic of the seekers of its patterning; if a mathematical system is based on a preconceived formulation of logic rather than a rigorous mapping of Natural phenomena, the system of mathematics will be confined to preconceived conceptions of relational possibilities. Their system of mathematics is based on building rigorously definable relational structures which are information-preserving transformations of Natural phenomena. The fundamental relations which form the basis of their system are called, *recurrents--*relations appearing repeatedly in diverse phenomena. They shun the notion of 'mathematical proof' because they say that counting is an incremental process and, therefore, its proofs must be constructed incrementally. And they say Nature is not limited to incremental processes; Nature's mandate is 'efficiency', not proof--it will sometimes produce a single result from a multiplicity of simultaneously occurring functions. They cited the System of the Distribution of Prime Numbers as an example of a synthesized outcome of rigorously interactive processes

According to them, primeness is used by Nature to create a system of markers which uniquely define the landscape of linear sequences. All of Nature's forces have to be kept in sync or the fabric of the universe would fall apart, but 'Time' is an ever-evolving continuum; locations on the landscape of the continuum have to be uniquely identifiable so that Nature's forces can maintain the alignment of their synchronization (that's why prime numbers relate to things like wave properties). To visualize the System of Prime Distribution, imagine a circle of 30 points, which are equally spaced around the arc. Starting with any point and moving in either direction (clockwise is shown in the diagram on left), Imagine counting the 30 points but begin the count with '0' instead of '1'; consequently, the 30 points are counted using the numbers '0' through '29'. But you don't stop counting--you continue with '30' through '59', and then '60' through '89', and so on--you're just infinitely counting around the same circle of points and writing the numbers next to them. Afterwards, if all these numbers were written next to the points as they were counted; the prime numbers--with the exception of the *elemental numbers*, '2', '3', and '5'--would all be written next to the same, eight points. The first numbers to be written next to the eight points: '1', '7', '11', '13', '17', '19', '23', and '29' (as shown in the diagram); are all prime except for '1' or 'unity'. As stated in the discussion of *elemental numbers*, '7' and '11' are the first two primes to appear in the cycle (not '2' and '3'). But this cycle is only part of the system.



The Table below illustrates that the \*PRIMES always emerge in the same 8 positions of the Cycle (left).

U	1	2	3	4	э	p	/	8	9	10	11	12	13	14	15	10	17	18	19	20	21	22	23	24	25	20	21	28	29
30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119
120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149
150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179
180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209
210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239
240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269
270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299
300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329
330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359
360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389
390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419
420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	

04

07

\*With the exception of the Elemental Numbers, '2', '3', and '5'

The Calculations shown below illustrate that all composites in the same 8 positions as the primes are products of previously emerging primes (the products of the primes in the 1st cycle account for all composites in the 2nd through 7th cycles).

7 x 7 = 49 7 x 11 = 77 7 x 13 = 91 7 x 17 = 119 7 x 19 = 133 7 x 23 = 161 7 x 29 = 203 7 x 31 = 217 7 x 37 = 259 7 x 41 = 287 7 x 43 = 301 7 x 47 = 329 7 x 53 = 371 7 x 59 = 413 ... 11 x 11 = 121 11 x 13 = 143 11 x 17 = 187 11 x 19 = 209 11 x 23 = 253 11 x 29 = 319 11 x 31 = 341 11 x 37 = 407 ...

After primes emerge within the cycle, they are involved in another process which is integrated within the overall system of distribution. After a prime number emerges, products based on that prime's sequential multiplication by powers of itself and each higher prime will systematically emerge in future progressions of the cycle. Here's how it works: the first prime to appear is '7', and '7' multiplied by itself is '49'; so the composite, 49, will appear in one of the eight locations in the next rotation of the cycle. Then '7' is multiplied by the second prime to appear, '11'; so '77' is the next composite which will be included. Then '7' is multiplied by the third prime, '13'; will result in the inclusion of the composite, 91. And this continues: '7' is infinitely multiplied by powers of itself and each higher prime. All these composites will eventually emerge within the same cycle as the primes. The appearance of every prime number spawns an endless string of composites which will be incorporated into future manifestations of the cycle. Since these composite products are originating in a cycle which is unevenly spaced, and the pattern of their factorization is not aligned with the pattern of the cycle; the system's underlying regularity becomes less and less apparent as the composite products continue to build-up.

The entire system is completely rigorous and the appearance of every prime number and every composite can be predicted (click here for the demonstration of rigorousness and predictability). However, the two processes--the cyclic progression and the factorization of the composites which will be included in that progression--are inseparable; this is the reason that the system as a whole cannot be expressed algebraically. Number theorists are aware of both processes involved in the System of Prime Distribution but they see them separately, as a *reduced residue class* and a *sieving routine,* rather than as the integrated components of a single system.



Now lets move to another subject. We've all been wondering why they based their communication with us on glyphs which are a geometric/spatial transformation of *our language*. Obviously, it makes sense that it would be easier for us to communicate in our own language. However, visualization

is the foundation of their approach to communication and the lettersequences which form our written words are not visual images--they are a form of abstract symbolization which has no visual meaning. Written words are not images because the visual characteristics of their form are irrelevant; if that were not true, the same word would have an entirely different meaning depending on whether it was hand printed, written in script, typed in uppercase or lowercase, written in Braille, or spelled verbally. The form of the letters is irrelevant to the transmission of a word's meaning because the visual characteristics of a letter do not define its identity--a letter's identity is defined by its role in the patterning of lexical sequences. Although written language is not visually expressive, its patterning is capable of triggering meaningful imagery; consequently, in some sense, it would have to be in sync with our mechanism of *comprehending* imagery.

The makers of the glyphs assumed we were aware that our written words were an abstract symbolization of the lexical relations of our language. And they assumed we would recognize the visual modeling of the information encoded in our alphabetic sequences. They produced an informationpreserving transformation of our written language based on what they consider to be the fundamentals of visual modeling, the point, line, and *circle*. To them, a circle is a regular polygon with an infinite number of vertices. If all these vertices were to be interconnected with lines, the result would be an infinite number of lines moving in an infinite number of directions in the two-dimensional space within the circle. Since every one of these lines is comprised of an infinite number of points, all possibilities of two-dimensional form can be mapped within the relational patterning defined by a circle. Since the model of our written language was constructed using visual fundamentals, and all content of the alphabetic system was included in the model; they assumed we would recognize the forms.

\*Originally presented online as a Net Art Project by Turbulence.org and North American Center for Interdisciplinary Poetics (online until 2022). Copyright © 2005 Mchael Winkler