

From Hydra to the Flickering Flame

“There are lots of doors to go through to get to the meaning of the code. Every time you enter one doorway you might, in the distance, see another door. You go through that doorway and then you go through another doorway. It unfolds as it's deciphered.”

Jim Sanborn (from November, 2005 CNN Jamie McItyre video)

There are many layers. A lot of thought went into this. There is more to the puzzle than what's been talked about. Ed Scheidt (from Elonka's 2003 road trip)

According to an interview with Elonka Dunin (from Elonka's 2003 road trip), Ed Scheidt made a point of saying that he used to be an “op” (operative), and that Kryptos is designed to be solved in a straight-forward manner with pencil and paper. He talked about how the code was designed so that someone could come along 15 years later, having forgotten the keys, and still be able to figure it out via the clues that were there.

“Imagine that you have an operative in place that you will need to get a message to in the future. It could be 15 years down the road - you won't have any contact with them in the meantime. You have to assume that they will not remember the key. How do you deliver a message in such a way that it conveys not only the encrypted data, but also the key?”

Ed claimed that it was necessary to recover the keys, and that the keys were concealed at the sculpture. He made a specific point that the *key* is not necessarily the *keyword*.

“In a modern digital system, the key is the keyword or number that you need to decrypt the message. Everyone knows the algorithm. It is just a black box into which you insert the key and the encrypted text, and the answer comes out the other end. In analog systems (as used in Kryptos) the **key is the algorithm.**”

He implied that, even though people may have discovered the text of the first 3 parts, they still didn't understand how the message was constructed and how his fictitious “operative in the field” would have solved the problem.

The goal was to create something you would look at if you were working an intel operation. (B-roll comments, Ed Scheidt New York Times interview, April 21, 2006)

I will demonstrate that the keys Ed mentions are genuine, come from a variety of sources, and direct you to do things. They even tell you when you've got the correct result. And they've been right in front of you, all along.

According to Jim Sanborn, artist/sculptor of Kryptos, Ed Scheidt gave him an outline of historic and contemporary encoding systems that have been formally used by the agency (in 1990) and were still used by the agency and other people.

“He gave me a whole variety of possible systems to use and ways to modify those systems. But as a visual artist, I like to rely on systems that include visual material as well as digital material that can be deciphered by machines. It's well-known that I did use some matrix codes Ed gave me (in K1, K2, K2+, and K3). I have also designed visual systems for encoding, which are much harder for cryptographers to crack because they're individualistic.”

Excerpts from Sanborn's interview in NPR's All Things Considered

“There are encoding systems which use pattern, light and shadow, and it's those kinds of systems that I was most interested in using, because I'm an artist... and I chose not to use, in at least what's been deciphered already, perhaps what has not been deciphered... I like to use spatial systems of encoding and decoding.”

I'm in a unique position: I'm an artist, not a mathematician, but I do have other skills, more visual skills, that were brought to bear in designing the code.”

“I will say that I have left instructions in the earlier text that refer to later text. That's as far as I'll go.”

?OBKR

UOXOGHULBSOLIFBBWFLRVQQPRNGKSSO
TWTQSJQSSEKZZWATJKLUDIWINFBNYP
VTTMZFPKWGDKZXTJCDIGKUHUAUEKCAR

As we will see, the strategy to solve K4 involves observation, interpretation and the expectation of confirmation.



When shown the out-of-alignment letters, Sanborn said, “They’re important”, and then asked if anything else had been figured out about them. (Elonka’s 2003 road trip)

DYAHR

Anagrams: HARD Y, HD RAY, HYDRA

HYDRA¹

Noun

- 1: (Greek myth) monster with nine heads, slain by Hercules. When struck off, each head was replaced by two new ones;
- 2: a long faint constellation in the southern hemisphere near the equator stretching between Virgo and Cancer [syn: Hydra, Snake]
- 3: A persistent or multifaceted problem that cannot be eradicated by a single effort. “In Kryptos, we may be facing a hydra that defies any easy solution.”

As I see it, there is no better definition of **Kryptos** than a persistent or multifaceted problem that cannot be eradicated by a single effort.

And the Greek myth of Hydra fits nicely in the mythos of Kryptos.

The sculpture, if viewed from above, looks like a slithering snake. However, I suspect that the notion of a monster with nine heads, such that when a head is struck off, each was replaced by two new heads, will maintain our focus for a while.

A clue found in the K4 CT corroborates the notion of adding and then removing, but provides no specifics. This **ADD/CUT** clue will become significant later.

?OBKRUO
XOGHULB
SOLIFBB
WFLRVQQ
PRNGKSS
OTWTQ SJ
QSSEKZZ
WATJKLU
DIAWINF
BNYPVTT
MZFPKWG
DKZXTJC
DIGKUH
AUEKCAR

?OBKR

UOXOGHULBSOLIFBBWFLRVQQPRNGKSSO
TWTQ SJQSSEKZZWATJKLUDIWINFBNYP
VTTMZFPKWGDKZXTJCDIGKUHUAUEKCAR

?OBKRUOXOGHULBSOLIFBBWFLRVQQPRNGKSSOTWTQ SJQSSEKZZWATJKLUDIWINFBNYPVTTMZFPKWGDKZXTJCDIGKUHUAUEKCAR

Nine heads x two replacements per head = 18 replacements.

Consider the distribution of characters in K4’s CT.

K4 CT distribution

- A : AAAA
- B : BBBB
- C : CC
- D : DDD
- E : EE
- F : FFFF
- G : GGGG
- H : HH
- I : IIII
- J : JJJ
- K : KKKKKKK
- L : LLLL
- M : M
- N : NNN
- O : OOOOO
- P : PPP
- Q : QQQQ
- R : RRRR
- S : SSSSS
- T : TTTTT
- U : UUUUU
- V : VV
- W : WWWWW
- X : XX
- Y : Y
- Z : ZZZZ



8666555444444443333222211
KSTUBOWAFGILQRZDJNPCEHVXMY

Note, in particular, Y : Y
A : AAAA
R : RRRR the raised letters from DYAH R.

We now have our nine heads, YAAAARRRR. Why we focus on them, and not the D’s or H’s might be summed up as follows.

1 Recall my, now ancient, post about DYAH R → HYDRA, Kryptos group message #3796, Oct 22, 2005, 5:05 pm

THE REMAINS OF PASSAGE DEBRIS THAT ENCUMBERED THE LOWER PART OF THE DOORWAY WAS REMOVED

The five characters **D^YA^HR** from K3's CT (cipher text), form the **DOORWAY**. Removing the lower part, that is, the non-raised letters, **DH**, leaves the letters **YAR**.

Now recall the quote from the end of K3's PT (plain text), **CANYOUSEEANYTHINGQ**, which happens to be 18 characters.

Split into digraphs. **CA NY OU SE EA NY TH IN GQ**

There are nine digraphs and nine **YAR**'s. **Y A A A A R R R R R**
 CA NY OU SE EA NY TH IN GQ

Replace all **YAR**'s in K4's CT, with digraph replacements, in order².

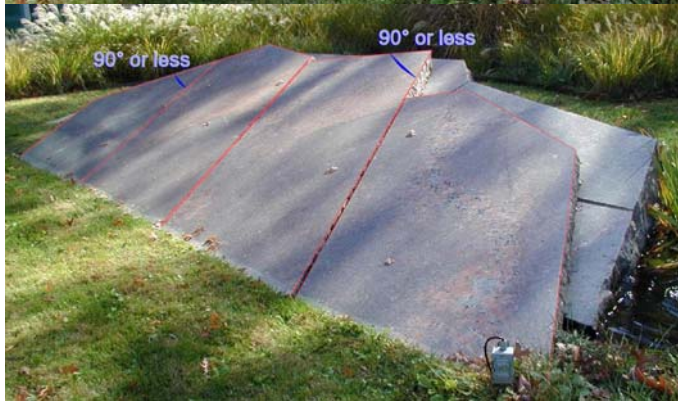
K4 CT (without the ?) Highlight all the **Y**'s, **A**'s and **R**'s. Exchange those **YAR**'s with the ordered series of digraphs from the final K3 passage, **CAN YOU SEE ANYTHINGQ**, CA NY OU SE EA NY TH IN GQ.

OBKRUOX	OBKRUOX	OBK CA UOX
OGHULBS	OGHULBS	OGHULBS
OLIFBBW	OLIFBBW	OLIFBBW
FLRVQQP	FLRVQQP	FL NY VQQP
RNGKSSO	R NGKSSO	O UNGKSSO
TWTQSQJQ	TWTQSQJQ	TWTQSQJQ
SSEKZZW	SSEKZZW	SSEKZZW
ATJKLUD	A TJKLUD	S E T JKLUD
IAWINFB	I AWINFB	I E AWINFB
NYPVTM	N YPVTM	N N YPVTM
ZFPKWGD	ZFPKWGD	ZFPKWGD
KZXTJCD	KZXTJCD	KZXTJCD
IGKUHUA	I GKUHUA	I GKUH U T H
UEKCAR	UEK C A R	UEK C I N G Q



Now what? Well, from simple observation, the letters **C** and **U** play a significant role in the Kryptos environment. In addition to the **UC** of the final K3 passage, **CAN U C ANYTHING**, we can find the letters **CU** (actually, **Cu**) in the atomic symbol of the element copper, the material used prominently in the sculpture's copper plate and the Morse code engraving on the strata outcroppings located in the front entrance.

We can also find the letters **CU** in a clue from the inner courtyard outcroppings. The following photographs were taken with the camera looking away from the sculpture. **Courtyard strata outcropping farthest from the sculpture** **Courtyard strata outcropping nearest to the sculpture**



Courtyard strata outcropping farthest from the sculpture

Courtyard strata outcropping nearest to the sculpture

From the camera's vantage point, if we were to mark the number of exterior corners of the outcropping's granite faces that are 90° or less, we can immediately derive the signals **.-.-** (farthest strata) and **-..** (nearest strata) or, where 1 represents a dit and 0 a dash, 1010 and 011. However³, if we were to stand on the other side of the strata and look towards the sculpture, then from our new vantage point, the signals become 0101 (farthest strata) and 110 (nearest strata). These signals represent, in Morse code, the letters **C** and **U**, respectively.

2 Recall my initial manipulations, mentioned in a previous post to the Yahoo Kryptos group, message #5231, June 28th, 2006, 6:12 am.
 3 Actually, a simple change in our representation (where 0 represents a dit and 1 a dash) would do the same.

Highlight the U's and C's
(CAN UC ANYTHING Q?)

Now remove
the U's and C's

leaving us with... ...aligned neatly for display.

OBKCAUOX
OGHULBS
OLIFBBW
FLNYVQQP
OUNGKSSO
TWTQSQJ
SSEKZZW
SETJKLUD
IEAWINFB
NNYPVTTM
ZFPKWGD
KZXTJCD
IGKUHUTH
UEKCINGQ

OBK A OX
OGH LBS
OLIFBBW
FLNYVQQP
O NGKSSO
TWTQSQJ
SSEKZZW
SETJKL D
IEAWINFB
NNYPVTTM
ZFPKWGD
KZXTJ D
IGK H TH
EK INGQ

OBKAOX
OGHLBS
OLIFBBW
FLNYVQQP
ONGKSSO
TWTQSQJ
SSEKZZW
SETJKLD
IEAWINFB
NNYPVTTM
ZFPKWGD
KZXTJD
IGKHTH
EKINGQ

OBKAOX
OGHLBS
OLIFBB
WFLNYV
QQPONG
KSSOTW
TQSQJS
SEKZZW
SETJKL
DIEAWI
NFBNNY
PVTTMZ
FPKWGD
KZXTJD
IGKHTH
EKINGQ

OBKAOXOG
HLBSOLIF
BBWFLNYV
QQPONGKS
SOTWQSQJ
QSSEKZZW
SETJKLDI
EAWINFBN
NYPVTTMZ
FPKWGDZK
XTJDIGKH
THEKINGQ

OBKAOXOGHLBS
OLIFBBWFLNYV
QQPONGKSSOTW
TQSQJSSEKZZW
SETJKLDIEAWI
NFBNNYPVTTMZ
FPKWGDZKZXTJD
IGKHTHEKINGQ

96 (12x8)

96 (8x12)

96 (6x16)

A : AA
B : BBBB
C :
D : DDD
E : EEEE
F : FFFF
G : GGGG
H : HHH
I : IIII
J : JJJ
K : KKKKKKKK
L : LLLL
M : M
N : NNNNNN
O : OOOOOO
P : PPP
Q : QQQQ
R :
S : SSSSSS
T : TTTTTT
U :
V : VV
W : WWWW
X : XX
Y : YY
Z : ZZZZ

OBKAOXOGHLBSOLIFBBWFLNYV
QQPONGKSSOTWQSQJSSEKZZW
SETJKLDIEAWINFBNNYPVTTMZ
FPKWGDZKZXTJDIGKHTHEKINGQ 96 (24x4)

The King is revealed. DIG KH⁴ THE KING Q

We've lost a character, going from 97 to 96, because there were 10 UC's, not 9. This little fact will play a role, later.

THE REMAINS OF PASSAGE DEBRIS THAT ENCUMBERED THE LOWER PART OF THE DOORWAY WAS REMOVED (continued)

Before we move on to the next key, we need to fulfill the entire clue, and this involves the word WAS⁵, which implies that the action took place in the past.

We also have the previously referenced PALIMPSEST, which, at least with the Archimedean example, involved shifts of 90°.

Folks, we need to make a temporal shift, to go back in time. So do what you gotta do; but not to worry, those pedestrians without the capacity can follow along by faking it: Simply turning your clocks back, say, 15 minutes (90° or a quarter of a dial) ought to do it. You can also wave your arms, if you want.

We need to do the same with our matrix. Consider our matrix as if it was sitting on a dial or a compass rose. Transpose it counter-clockwise, as if turning it a quarter dial to the left.

Note: I've highlighted DIGKHTHEKING to make the transposition easier to follow, you know, for those CIA or NSA folks among us. Try to keep up.

OBKAOX OGHLBS OLIFBB WFLNYV QQPONG KSSOTW TQSQJS SEKZZW SETJKL DIEAWI NFBNNY PVTTMZ FPKWGD KZXTJD IGKHTH EKINGQ	Transposed 90° counter-clockwise ↶	XSBVGWSWLIYZDDHQ OBBYNTQZKWNMGJTG ALFNQOJZJANTWTHN KHILPSSKTEBTKXKI BGLFQSQEEIFVPZGK OOOQKTSSDNPFKIE	96 (6x16)
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WITH TREMBLING HANDS I MADE A TINY BREACH IN THE UPPER LEFT HAND CORNER

Now everyOne's got a theory about this passage. The reservation is where/when to apply it? Well, how about here/now?

X marks the spot. Again, for those with intel credentials, the "upper left hand corner" is on the left, towards the top.

XSBVGWSWLIYZDDHQ
OBBYNTQZKWNMGJTG
ALFNQOJZJANTWTHN
KHILPSSKTEBTKXKI
BGLFQSQEEIFVPZGK
OOOQKTSSDNPFKIE 96 (16x6)

⁴ The KH provides us a timely occasion for this revelation. Granted, there are those of you, you Egyptologists out there (you know who you are) will immediately go from KH to Khufu. But may I suggest we pull ourselves back from the trees a touch and see the forest? Kryptos sits in the courtyard of the CIA. And when people at the CIA think KH, they think South East Asia, specifically, Cambodia. The ex King of Cambodia, Norodom Sihanouk, wrote a book about the CIA's agenda with his country, MY WAR WITH THE C.I.A., Cambodia's Fight for Survival. It's not a pretty story. And some of the players did some God awful things. This past week, one of those players/bastards, The BUTCHER, a member of 1970's Pol Pot version of the Khmers Rouge, the man behind Cambodia's Killing Fields, Ta Mok (pronounced "Ass wipe" by those who knew him) died awaiting trial in prison for crimes against humanity and genocide. <Insert magical, stomach calming, smile inducing, segue here>

⁵ 'Was' was 'were' in at least one account attributed to Howard Carter.

AND THEN . . .

Another temporal clue, instructing us to move forward in time and transpose our matrix accordingly.

So let's transpose our matrix 90° clock-wise ↻, essentially where we were before we highlighted the **X**.

. . . WIDENING THE HOLE A LITTLE

We expand our breach by highlighting the **O** next to the **X**.

OBKAOX
OGHLBS
OLIFBB
WFLNYV
QQPONG
KSSOTW
TQSJQS
SEKZZW
SETJKL
DIEAWI
NFBNNY
PVTTMZ
FPKWGD
KZXTJD
IGKHTH
EKINGQ

I INSERTED THE CANDLE AND PEERED IN

Let me introduce to you our CANDLE for the evening, providing both light and a cavity in which to PEER (gaze).

Introducing LUMINA

Function: *noun*

Inflected Form: *plura form of lumen*

Etymology: New Latin *lumin-*, *lumen*, from Latin, light, air shaft, opening

- 1. Anatomy: the inner open space or cavity or bore of a tubular organ, as of a blood vessel or an intestine (or as of a hollow needle or catheter) <the *lumen* of a blood vessel>
- 2. Botany: the cavity bounded by a plant cell wall.
- 3. Physics: a unit of luminous flux in the International System, equal to the amount of light emitted through a unit solid angle by a uniform point source of one candle intensity radiating equally in all directions. Abbreviation. **lm**

But before we insert our candle, let's have a hardy (DYAHR) chuckle with some home grown American comedy, right from the nation's capital...

THE HOT AIR ESCAPING FROM THE CHAMBER

When you think of **HOT AIR**, what comes to mind?

That's right folks, living in Washington DC, Sanborn has heard it before. **BS**

Removing our breach...

out pops **BBBS**⁶.

In goes our candle, LUMINA. Now take a look at the matrix, folks. A good hard look. What do you see?

OBKA--	OBKA--	OBKAMA
OGHLBS	OGHL--	OGHLUN
OLIFBB	OLIF--	OLIFLL
WFLNYV	WFLNYV	WFLNYV
QQPONG	QQPONG	QQPONG
KSSOTW	KSSOTW	KSSOTW
TQSJQS	TQSJQS	TQSJQS
SEKZZW	SEKZZW	SEKZZW
SETJKL	SETJKL	SETJKL
DIEAWI	DIEAWI	DIEAWI
NFBNNY	NFBNNY	NFBNNY
PVTTMZ	PVTTMZ	PVTTMZ
FPKWGD	FPKWGD	FPKWGD
KZXTJD	KZXTJD	KZXTJD
IGKHTH	IGKHTH	IGKHTH
EKINGQ	EKINGQ	EKINGQ 96

Do you see it? The next key to our adventure? Take a closer look. What do we expect to see? Confirmation!

(we disengage; we turn the page)

6 Seems to be a lot more bull than S, and that's no stutter.

Here, let me help.

```

E
M
OBKAMA
OGHLUN
OLIFLICKER
WFLNYV
QQPONG
KSSOTW
TQSSJQS
SEKZZW
SETJKL
DIEAWI
NFBNNY
PVTMZ
FPKWGD
KZXTJD
IGKHTH
EKINGQ 102 characters
    
```

Putting it all together...

THE HOT AIR ESCAPING FROM THE CHAMBER CAUSED THE **FLAME** TO **FLICKER**

Because the HOT AIR ESCAPING passage happens after we peered in, we need to again move temporally forward and transpose the matrix 90° clockwise ↻.

```

E
M
OBKAMA
OGHLUN
OLIFLICKER
WFLNYV
QQPONG
KSSOTW
TQSSJQS
SEKZZW
SETJKL
DIEAWI
NFBNNY
PVTMZ
FPKWGD
KZXTJD
IGKHTH
EKINGQ 102 characters

Transposed 90° counter-clockwise ↻
EIKFPNDSSTKQWOOO
KGZPVFIEEQSQFLGB
IKXKTBEKSSPLIHK
NHTWTNAJZJOONFLAME
GTJGMNWKZQTNYBLUM
QHDDZYILWSWGVINA
C
K
E
R
    
```

At this point we have a number of choices to make. Consider it a Y in the Road, or looking at it a different way, a ReQuest.

<p>A</p> <p>Do we use the results above?</p> <pre> EIKFPNDSSTKQWOOO KGZPVFIEEQSQFLGB IKXKTBEKSSPLIHK NHTWTNAJZJOONFLAME GTJGMNWKZQTNYBLUM QHDDZYILWSWGVINA C K E R </pre>	<p>B</p> <p>Or, say a scaled down version (without the ME and CKER)?</p> <pre> EIKFPNDSSTKQWOOO KGZPVFIEEQSQFLGB IKXKTBEKSSPLIHK NHTWTNAJZJOONFLA GTJGMNWKZQTNYBLUM QHDDZYILWSWGVINA </pre>	<p>C</p> <p>Or, perhaps only removing BS, leaving the BB</p> <pre> EIKFPNDSSTKQWOOO KGZPVFIEEQSQFLGB IKXKTBEKSSPLIHK NHTWTNAJZJOONFLA GTJGMNWKZQTNYBLUM QHDDZYILWSWGVBINA </pre>	<p>D</p> <p>Again, only removing BS, leaving the BB</p> <pre> EIKFPNDSSTKQWOOO KGZPVFIEEQSQFLGB IKXKTBEKSSPLIHK NHTWTNAJZJOONFLA GTJGMNWKZQTNYBLUM QHDDZYILWSWGVB INA </pre>	<p>E</p> <p>Yada yada yada</p> <pre> EIKFPNDSSTKQWOOO KGZPVFIEEQSQFLGB IKXKTBEKSSPLIHK NHTWTNAJZJOONFLA GTJGMNWKZQTNYBLUM QHDDZYILWSWGVBINA </pre>
<p>Fu</p> <p>Or, for those Dan Brown devotees⁷...</p> <pre> EIKFPNDSSTKQWOOO KGZPVFIEEQSQFLGB IKXKTBEKSSPLIHK NHTWTNAJZJOONFLA GTJGMNWKZQTNYBLUM QHDDZYILWSWGVINA TI </pre>	<p>Cu</p> <p>Same as above, but including the ME and CKER</p> <pre> EIKFPNDSSTKQWOOO KGZPVFIEEQSQFLGB IKXKTBEKSSPLIHK NHTWTNAJZJOONFLAME GTJGMNWKZQTNYBLUM QHDDZYILWSWGVBINA C K E R </pre>	<p>Du</p> <p>Yada</p> <pre> EIKFPNDSSTKQWOOO KGZPVFIEEQSQFLGB IKXKTBEKSSPLIHK NHTWTNAJZJOONFLAME GTJGMNWKZQTNYBLUM QHDDZYILWSWGVB INA C K E R </pre>	<p>Eu</p> <p>Yada yada</p> <pre> EIKFPNDSSTKQWOOO KGZPVFIEEQSQFLGB IKXKTBEKSSPLIHK NHTWTNAJZJOONFLAME GTJGMNWKZQTNYBLUM QHDDZYILWSWGVBINA C K E R </pre>	

⁷ You all realize by now, I hope, that Kryptos was commissioned in the late 80's, a generation before Dan got around to penning the Da Vinci Code. Kryptos has absolutely nothing to do with the theories of Mr. Brown, or his wife. Though, of course, Dan and his handlers would love to hitch his ride to Sanborn's wagon. Heidi, my dear, you need to call me.

Expanding the matrices to a single row provides us the following:

A	EIKFPNDSSTKQWOOOKGZPVFIEEQSQFLGBIKXKTBTBKSSPLIHKNHTWTNAJZJOONFLAMEGTJGMNWKZQTNYLUMQHDDZYILWSWGVINA	CKER	102
B	EIKFPNDSSTKQWOOOKGZPVFIEEQSQFLGBIKXKTBTBKSSPLIHKNHTWTNAJZJOONFLAGTJGMNWKZQTNYLUMQHDDZYILWSWGVINA		96
C	EIKFPNDSSTKQWOOOKGZPVFIEEQSQFLGBIKXKTBTBKSSPLIHKNHTWTNAJZJOONFLAGTJGMNWKZQTNYLUMQHDDZYILWSWGVINA		98
D	EIKFPNDSSTKQWOOOKGZPVFIEEQSQFLGBIKXKTBTBKSSPLIHKNHTWTNAJZJOONFLAGTJGMNWKZQTNYLUMQHDDZYILWSWGVINA		98
E	EIKFPNDSSTKQWOOOKGZPVFIEEQSQFLGBIKXKTBTBKSSPLIHKNHTWTNAJZJOONFLAGTJGMNWKZQTNYLUMQHDDZYILWSWGVINA		98
Cu	EIKFPNDSSTKQWOOOKGZPVFIEEQSQFLGBIKXKTBTBKSSPLIHKNHTWTNAJZJOONFLAMEGTJGMNWKZQTNYLUMQHDDZYILWSWGVINA	CKER	104
Du	EIKFPNDSSTKQWOOOKGZPVFIEEQSQFLGBIKXKTBTBKSSPLIHKNHTWTNAJZJOONFLAMEGTJGMNWKZQTNYLUMQHDDZYILWSWGVINA	CKER	104
Eu	EIKFPNDSSTKQWOOOKGZPVFIEEQSQFLGBIKXKTBTBKSSPLIHKNHTWTNAJZJOONFLAMEGTJGMNWKZQTNYLUMQHDDZYILWSWGVINA	CKER	104
Fu	EIKFPNDSSTKQWOOOKGZPVFIEEQSQFLGBIKXKTBTBKSSPLIHKNHTWTNAJZJOONFLAGTJGMNWKZQTNYLUMQHDDZYILWSWGVINA		98

But now consider K3's penultimate passage.

BUT PRESENTLY DETAILS OF THE ROOM WITHIN EMERGED FROM THE MIST

PRESENTLY means momentarily, that is, very soon, but still future. So, as before, we ought to take this as a clue directing us to transpose our matrix 90° clockwise, once again. With all the options available to us, this will double the number of potentially required investigations.

EIKFPNDSSTKQWOOO
 KGZPVFIEEQSQFLGB
 IKXKTBTBKSSPLIHK
 NHTWTNAJZJOONFLAME
 GTJGMNWKZQTNYLUM
 QHDDZYILWSWGVINA
 C
 K
 E
 R

Transposed 90° counter-clockwise ↺

QGNIKE
 HTHKGI
 DJTXZK
 DGWKPF
 ZMTTVP
 YNNBFN
 IWAEID
 LKJTES
 WZZKES
 SQJSQT
 WTOSK
 GNOPQQ
 VYNLFW
 REKCLFILO
 NULHGO
 AMAKBO
 M
 E

We now find ourselves with a matrix that is essentially the reverse of K4's original CT. This corresponds nicely with the clue found in K1's PT⁸.

BETWEEN SUBTLE SHADING AND THE ABSENCE OF LIGHT LIES THE NUANCE OF IQLUSION

⁸ Recall my earlier post to the Yahoo Kryptos group, message #5231, June 28th, 2006, 6:12 am.

K1's PT

BETWEEN SUBTLE SHADING AND THE ABSENCE OF LIGHT LIES THE NUANCE OF IQLUSION

Between SS and removal of C⁹ lies the NI.

Recall that the original K4 CT had two C's near the end.

```

                                OBKR
UOXOGHULBSOLIFBBWFLRVQQPRNGKSSO
TWTQSJQSSEKZZWATJKKLUDIWINFBNYP
VTTMZFPKWGDZXTJCDIGKUHUAUEKCAR
                ↑           ↑
    
```

But our previous UC removal has removed them. There are also two SS digraphs. Find either SS and walk towards The King.

```

K4's original CT      OBKRUOXOGHULBSOLIFBBWFLRVQQPRNGKSSOTWTQSJQSSEKZZW
                     ATJKLUDIWINFBNYPVTTMZFPKWGDZXTJCDIGKUHUAUEKCAR    97 characters
                               ↑           ↑
    
```

```

K4's original CT      OBKAOXOGHLBSOLIFBBWFLNYVQQPONGKSSOTWTQSJQSSEKZZW
+ Hydra substitution, SETJKLDIEAWINFBNNYPVTTMZFPKWGDZXTJ DIGKHTHEK INGQ    96
+ UC removal,                               ↑           ↑
    
```

```

K4's original CT      OBKAMAOGHLUNOLIFLIWFLNYVQQPONGKSSOTWTQSJQSSEKZZW
+ Hydra substitution, SETJKLDIEAWINFBNNYPVTTMZFPKWGDZXTJ DIGKHTHEK INGQ    96
+ UC removal,
+ transposition 90° counter-clockwise,
+ make tiny breach,
+ transposition 90° clockwise,
+ widen breach,
+ insert candle,
+ causing the flame to flicker.
    
```

You will come across IN (twice). But we require NI (it's an ordering thing). This provides us a genuine reason to reverse K4's CT, thus placing the question mark at the end. Something, I suspect, many have sought to do, for some time now.

So, after our manipulations, we've arrived at the following matrix, which just happens to satisfy the ordering of SS and NI.

```

QGNIKE
HTHKGI
DJTXZK
DGWKPF
ZMTTVP
YNNBFN
IWAEID
LKJTES
WZZKES
SQJSQT
WTOSSK
GNOPQQ
VYNLFW
ILFILO
NULHGO
AMAKBO
    QGNIKEHTHKGIDJTXZKDGWKPFZMTTVPYNNBFNIWAEIDLKJTESWZZKESSQJSQTWTOSSKGNOPQVYNLFWILFILONULHGOAMAKBO    96
    QGNIKEHTHKGIDJTXZKDGWKPFZMTTVPYNNBFNIWAEIDLKJTESWZZKESSQJSQTWTOSSKGNOPQVYNLFWILFILONULHGOAMAKBO    96
    
```

I'll stop here to allow digestion. There is actually quite a ways to go.

A few things you need to notice: the extent of instructions provided to us from the K3 PT for our matrix manipulations, and the fact that many of the stages were confirmed from clues we should all be familiar with. As we will see, this will continue.

I'll leave you with this.

For those that haven't done the math, WW is the result of JS xor ED. That is, in a one-indexed alphabet (where A = 1, D = 4, E = 5, J = 10, S = 19 and W = 23), 23 = 10 xor 5, and 23 = 19 xor 4. In binary, 10111 = 01010 xor 00101 and 10111 = 10011 xor 00100.

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9 C, of course, is typically used in Physics to represent the velocity of light; not light itself.