

## Part TWO : TURK'S HEAD KNOT OR NOT ?

Subtitle : TURK'S HEAD KNOT = an Uncontrolled  
Appellation of Origin

This is a wink to : vins Français d'Appellation d'Origine  
Contrôlée. That is Wines with a Controlled Appellation of  
Origin. **A.O.C** wines.

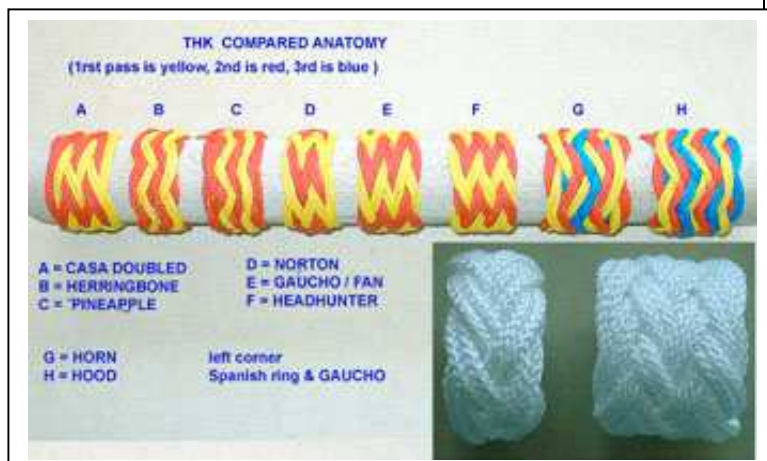
From the 'THK are not braided' article may be you will  
remember that I hold the view that :

**- THK should be a label strictly reserved for  
what in my perspective is the ORIGINAL BRAND  
( Part two )**

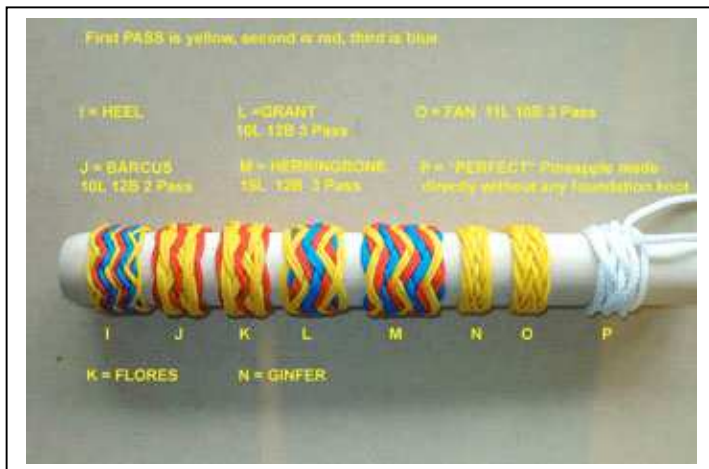
Using Bruce GRANT, Tom HALL's books, and of  
course ASHLEY's, I will attempt to clear some  
notions about THK,.

First a bit of compared anatomy.  
These photographs can be found on Nautille's Gallery at  
[www.khww.net](http://www.khww.net) in a larger size in case you need a better  
view.

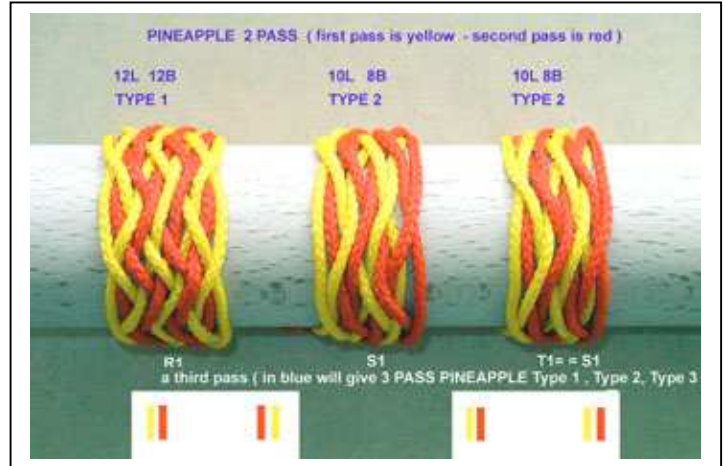
( Part 2 – Photo 1 )



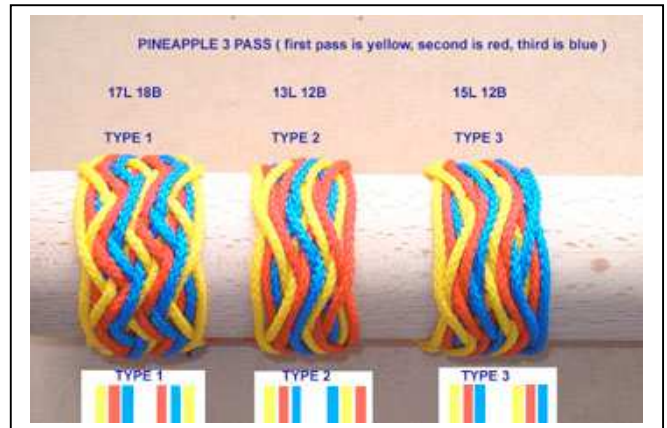
( Part 2 – Photo 2 )



( Part 2 – Photo 3 )



( Part 2 – Photo 4 )



This should be enough to show that a single label  
is asked to regroup a miscellany of knots, each of  
them being different from a 'basic THK'.

Chapter 17 of ASHLEY's book always made my  
(left!) eyebrow raise in query.

It would not have if this Turk's-Head chapter had  
been titled « Ring Knots » or « Circular Knots » ( flat  
and cylinder forms).

Of 124 entries in this chapter less than 60% (71) are  
about what I consider to be **THE** THK.

The word 'braided' appear only 3 times in the whole  
chapter under the guise of 'braided', twice in p225  
and once in p235, in reference with the material of  
the cordage, not in reference with the knot.

I think that the **STANDARD, UNICURSAL or SINGLE  
STRAND THK, COMPLYING WITH THE COMMON-  
DIVISOR RULE, WITH STRICTLY ALTERNATING OVER-  
UNDER CROSSING, IS THE ONLY ONE TYPE THAT  
SHOULD BE GIVEN THIS LABEL.** It is said to be a  
"CASA" by braiders;

This THK is the native or so to speak, the 'pure  
element', all the rest are at best alloys.

The name THK seemingly chosen after the head  
gear « turban » made with a *single length of cloth*, it  
makes sense that the single line THK alone should  
get this name.

Turban is of Asian origin. For Turks, in fact, it was common only for the Sultans in the Ottoman Empire period (very end of 13<sup>th</sup> c to beginning of 20<sup>th</sup> c)

In French it is 'Bonnet Turc' / Turkish Bonnet, this being 'le turban'

Playing with a pseudo-spirograph (simulation of the plane on plane motion of a moving circle on an immobile circle : rolling without slippage) is an important step toward understanding the plane geometry of THK :

<http://www.wordsmith.org/~anu/java/spirograph.html>

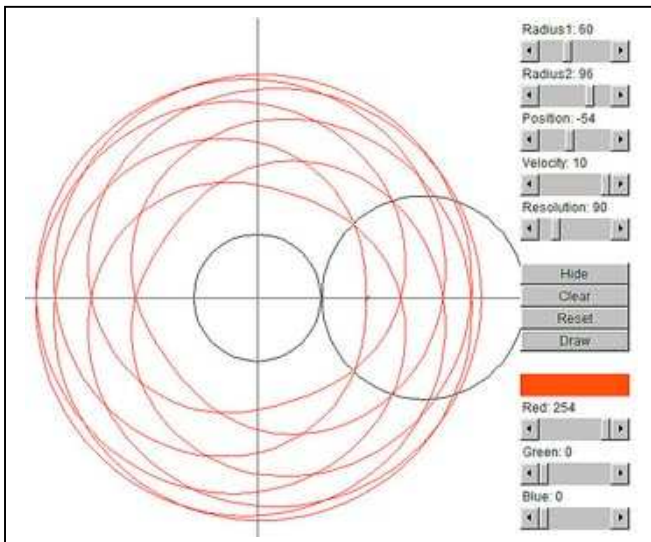
<http://thinks.com/java/spiro/spiro.htm>

<http://www.math.psu.edu/dlittl/java/parametric-equations/spirograph/SpiroGraph1.0/index.html>

<http://alumnus.caltech.edu/~jimmc/spiro/spiro.html>

<http://www.johngrindall.com/math/spiro/index.php>

This is the template of a 8L 5B THK drawn with a SPIROGRAPH (Part 2 – photo 5)



Let us examine some of the terms I make use of and of some that I did not keep after examination. Main check sources of my recall about words are my old bi-lingual Harraps dictionary, a relatively recent British Cambridge Dictionary, and of course French Dictionaries and Encyclopaedia.

\* *First a quick look* at those that I could have used to broadly qualify the categories of so-called THK but that I finally discarded.

I weighted COMBINED against :

--- COMPOUNDED. As in flowers : simple and compounded. I rejected it for the reason that P.P.O HARRISON use it as a label for 3L THK that has been extended in number of bights.

--- COMPOSITE : it could have done the job but what with the confusion with some type of resins.

\* *Second point* : the shade of meaning I put between BLENDED and AGGLOMERATED.

A **BLEND** is joining at least 2 different types of a given product. Think whisky blended.

**AGGLOMERATED** is for joining different categories of items

\* *Third point* :

The following words I rejected as not fully suitable for a broad categorization.

Note that some of them pertain to *structure* : \*lock, \*link ; and others to *process*: \*lace, \*twine, \*weave

**Interlink(ed)** = cause to join or connect together, with the parts joined having an effect on each other. This is tempting, the more so with the Celtic Links in the background of the mind.

**interlace**=to join ( different parts) together to make a whole, especially by crossing one thing over another or fitting one part *into* another.

**interlocking** = firmly joined together especially by one part fitting into another. connected in such a way that movement or change in one part cause movement or change in another. (not gradable) Tony aka Asemery chose to denote by Interwoven a TH in his gallery ; I think that for the Pineapple design, interlocked could be applied . Interlocked rings for me is more plausible than interwoven does.

**intertwine**= to twist, or be twisted together, or to be connected so as to be difficult to separate

There is a not really a winding movement entering in the making of a THK of any kind as there is in making 'twine'.

**interweave**( woven ) to weave (weave=twist) together or combine two or more things so that they cannot be separated easily.

A *weave technically imply weft \*and warp*, one being put in place before the other with fixed roles : a weft cannot play at being a warp ( or vice versa ) later in the work.

So I do not deem it precise enough, even if it immediately speaks to the mental imagery, to say THK are interwoven, even if I accept that the first THK put in place plays at being a simile weft and the second a simile warp.

I would really prefer to say they are interlocked.

\* *Fourth point* : a very 'peculiar' word : **variated**

I was set unto that by Brian's remark : « That is a variated turks head according to the Harrison Book of Knots. »

I could not then recall seeing it in HARRISON's book and did not find it after a new reading. GRAUMONT and HENSEL do use , "irregular", "unorthodox" in conjunction with THK and " variated" but that is with other knots than THK ( have not seen it used with THK )

I have to raise question marks: is it not **variagated** that is meant instead of "variated" ? or **variant** ?

Would not "variant" or "variety" be much better ?

I knew of 'variegated' and "variate" but had to go to dictionaries for 'variated' and did not found it.

'Variant' is not always adapted as it goes only for *small differences* between the "type" and the "variant" and differences between so-called THK and the true type are not always 'small'.  
'Variegated' can be the adequate word in some cases seeing the pattern of some so-called THK. Anyway using "variated" in the meaning of "variant" will never do the trick.

I will really appreciate standing corrected in case of mistake(s) in the correct ( English English) use of words.

Now for some quick considerations about qualities a criterion or a set of criteria should ideally possess. I tried to respect these :

- be **"valid"** : adapted to the factual reality one want to explore and not doing something else than what is intended at first.

- be **"fair"** : that is perfectly defining what is and what is not ( should exclude all 'the what is not' and none of the 'what is' **plus** should include all the 'what is' and none of the 'what is not')

- be **"precise"** : not too much random fluctuation depending in the surrounding conditions.

- be **"faithful"** or "constant" : result attained should be identical in the hands of several honest intelligent, diligent and informed end-users.

All the qualities of a reliable weighting scale.

The exception should be the 'unavoidable exception' indeed and should not detract from the 4 characteristics above stated .

I set on the way of the strictest definition of things I could find either in my mind or in documents and shunned ( well , err , tried too) all the every day blindly accepted usage , trying to go back to the root of meaning instead.

Knotting is technical matter so I think it is best to use technically accepted definitions.

SINGLE strand rule	O1-U1 / U1 O1 ALTERNATING	Comply to COMMON DIVISOR rule	
+	+	+	<b>ORIGINAL THK REGULAR</b>
+	+	NO	<b>IRREGULAR or NOT THK</b>
+	NO	+	<b>IRREGULAR</b>
+	NO	NO	<b>NOT THK</b>
NO	+	+	<b>ORIGINAL</b> wantonly made with several strands
NO	+	NO	Possible <b>COMBINED</b> or <b>NOT THK</b>
NO	NO	+	<b>IRREGULAR multi-strands THK</b>
NO	NO	NO	Possible <b>COMBINED</b> Or <b>NOT THK</b>

With 3 characters there are 8 possibilities of summarizing the situation.

**Categorization of THK** (Part 2 – Table 1 )

**Diagnosis flow chart** ( Part 2 – Table 2 )

For lay out reason these tables had to be put at the end of the text part.  
Please study them now.

## CONCLUSION :

I hope I have build a convincing logical case against the present way of speaking, thinking and writing about THK and that it may have put in a seed now germinating in your brain, to become a strong sappling.

Much about the way THK concept is spoken about by tyers is theology rather than rationality. So I must add the remark that my hope is quite a bit tongue in cheek :

I am under no great delusion or illusion. Creed cannot be altered by logic.

Only the already dissatisfied with what is said around THK may have the opportunity to accept to think anew.

THK ALTERNATIVE is but an euphemism for "not a THK at all".

I use it to humour THK worshippers and give a bow of respect to Stuart GRAINGER work.

PS

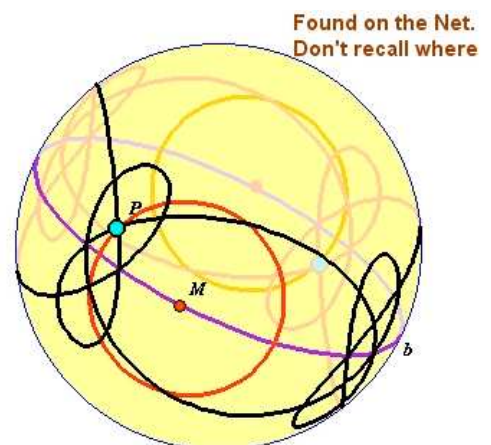
A LAST MINUTE FIND that shows that this is just a beginning and that tackling the 3D representation of trochoids has to be made by a professional mathematician.

Quoted ( after modification ) from

<http://antique.cinderella.de/en/demo/gallery/EllipticCycloid.html>

Java animation.

Is this a THK ?





Part 2 – Table 1

<b>TURK'S HEAD KNOTS</b> [ based on what GRANT and HALL put in their books, so not necessarily valid for others publications as far as COMPOSED THK or aping-THK knots are concerned as Authors at large are mostly clinging to their own personal conception. Nothing 'unified and agreed upon' by peer-review seems to exist as yet.]			
<b>SIMPLE THK</b> ( the knot is both the element <b>and</b> the unique sub-element & vice-versa) <b>TO ME THE ONLY « THK »</b> <b>by NATURE are of the general formulation</b> (x) L (y) B with $x < y$ x and Y being integer (without any decimal part)     mean absolute ( 'sign' +/- is not taken in account)  $ x-y  = 1$ or $ x-y  > 1$  I CALL THOSE <b>« SIMPLE REGULAR »</b>  (regular as in « following the rule, just like clergy orders !)  <b>BUT THERE ARE ALSO :</b> <b>--1-- « SIMPLE » THK NOT</b> <b>OBEYING TO THE RULE O1-U1 or U1-O1 WHILE STILL</b> <b>MADE WITH A SINGLE STRAND AND FOLLOWING</b> <b>THE NO COMMON DIVISOR RULE.</b> I CALL THEM <b>« SIMPLE IRREGULAR »</b> (as in not following the full rule : <b>MUTANTS</b> )  <b>--2-- THOSE</b> <b>NOT FOLLOWING THE</b> <b>COMMON DIVISOR RULE</b> (they may still be O1-U1 / U1-O1 <u>or not</u> )  <b>THOSE ARE NOT THK</b>  <b>They may be euphemistically said to be THK ALTERNATIVES to</b> <b>humour THK worshippers holding fast to theology</b>	<b>COMBINED</b> sub elements : assemblies can be either of CASA only, or CASA plus « something else ».		
	<b>CASA OF EQUAL « DIMENSION »</b> in L & B  They are relatives of « true » THK.  <b>DUPLICATION</b> Think : <b>TILING</b> or <b>TESSELTION</b>	<b>CASA OF UNEQUAL « DIMENSION »</b> in L & B  They are still relatives  <b>HYBRIDATION</b> Think : <b>MOSAIC</b>	<b>CASA AND « something else »</b>  They are more 'allied' than relatives.  <b>CHIMERA</b> Think : <b>GRYPHON</b>
	<b>FAN</b> (the CHECKERED form is tied from a CHECKERED HERRINGBONE followed by a 3 <sup>rd</sup> PASS in GAUCHO style )	<b>GRANT</b> ( said by T.HALL to be the « reverse » of a HORN )  Outer and Inner rims of bights at the border. Aping a PINEAPPLE	<b>BARCUS</b> End result mimicing the visual appearance of a FLORES made with two 5L 6B CASA tied as a HERRINGBONE followed by a 5L 6B 2 PASS GAUCHO ( GAUCHO having a « something else » in its composition it follows that when a GAUCHO serve as sub-component it give the « something else » to the structure made with its participation.
	<b>HANSEN</b> From a CASA that is doubled (follow the leader) then splitting the pairs with a 3 <sup>rd</sup> CASA which give a 3P GAUCHO PATTERN <i>It can be made with ONE Strand but does not alternate O1-U1 in the finished state.</i>	<b>HOOD</b> (if compared to HERRINGBONE in 3 colours the result is more equilibrated in this one ) HOOD <u>can be made with CASA of equal dimension</u> so it does have the property of being a TRANSITIONAL form between the colum on the left and this one). If tied with unequal CASA the first two are put as HERRINGBONE and the third as PINEAPPLE	<b>GAUCHO</b> ( Spanish RING ) CASA as template <b>AND</b> a NON-CASA 'threading' of Over-Under .  A GAUCHO of ONE PASS is 'only' a 9L 8B CASA so why call it GAUCHO 1P ?

	<p><b>HEADSHUNTER</b> ( the CHECKERED form is from CASA template BUT end with GAUCHO bights ) the 'normal' HEADHUNTER cannot be accepted in the CASA related family as at no one time in its construction it follow the 01-UI but jump soon to 02-U2 or 03-U3 ( or vice-versa) in the 2 PASS and 3 PASS. So I put them as NON THK. If they are NON-THK it follow that any structure they are part of are NOT THK .</p>	<p><b>HORN</b> ( so called 'nested' bight )  Somewhat aping the PINEAPPLE  2 successive CASA put in a HERRINGBONE then a 3<sup>rd</sup> CASA interlocked ( 'nested' bights) in PINEAPPLE fashion</p>	<p><b>FLORES</b> An astute way to ape a PINEAPPLE A 2 PASS type 1 PINEAPPLE <b>cannot</b> be tied from a 5L 6B CASA base – it would need an impossible 4L 6B CASA- Here a first 5L 6B CASA is followed by 5L 6B 2 PASS GAUCHO in such a way that ONLY the centre of the GAUCHO can be seen</p>
	<p><b>HERRINGBONE</b> 2 or 3 interlocked or interwoven CASA all of equal dimension in L &amp; B for a 2 or 3 PASS</p>	<p><b>NORTON</b> GAUCHO characters in this knot (bights and 'weave') 2 interlocked or interwoven CASA. A CASA knot DOUBLED is said by HALL to be a CHECKERED NORTON 2 PASS TYPE 2. You see how all this is entangled and is much in need of some weeding out</p>	
	<p><b>PINEAPPLE</b> 2 or 3 interlocked or interwoven CASA all of equal dimension in L &amp; B for a 2 or 3 PASS  Identical formulation as for HERRINGBONE but in both end results the rims of bights are not identical .  May be the SO-CALLED PERFECT ONE STRAND PINEAPPLE (by GRANT) which stricly alternate O-U in the finished state should be put as a 'true' THK just as much as the GAUCHO 1 PASSA which is 'only' a CASA</p>		

There is a special type of so-called 'THK' for which the formulation is not (x)L (y)B as in the CASA BUT (z)L (z)B the number of LEAD / PART / STRAND / TURN is equal to the number of BIGHT / SCALLOP / CROSS or share a common divisor though only ONE strand is used.

They are not COMBINED, they would be IRREGULAR AND SIMPLE but as they are not following the common divisor rule in my mind they are **not** THK in any way but rather they are aping THK :

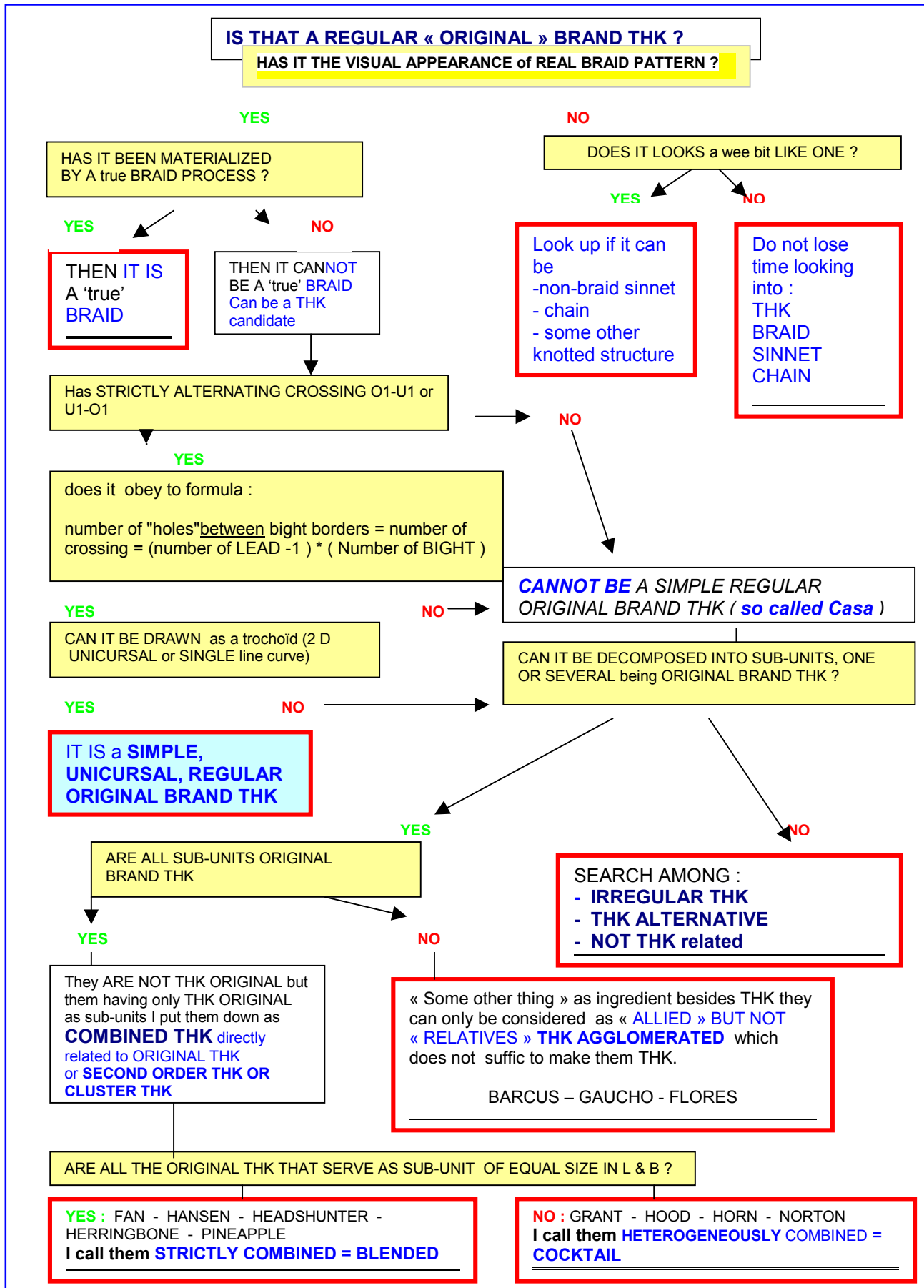
#### THK ALTERNATIVES.

I will put the so called MÖBIUS/MOEBIUS THK in the same NOT-THK bag and call it a MOEBIUS strip knot.  
Add GINFER into that bag too!

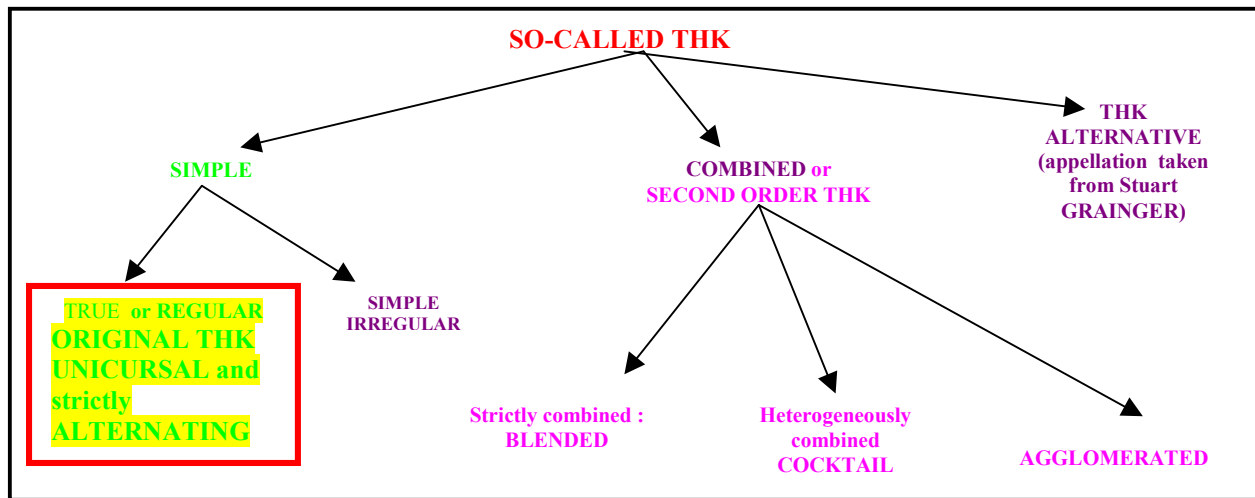
This only reflect my personal state of mind after some pondering and study and should not be given a visa to enter your own frame of mind without a personal intellectually honest critical examination .

I was professionally trained to consider that there is two great intellectual faults :

rejection without critical examination honestly conducted AND acceptance without critical examination honestly conducted.



## LIGHTHING FAST SUMMARY : In green ink THE ONLY A.O.C THK



There is plenty of place to make much better tables. So please go to work...

Charles HAMEL

Vitry-sur -Seine ( France ) Oct 2007