The Animals Went in Two by Two

Bob Richmond. 2016-08-05. DRAFT 1.

Ten seconds into "Repeating operators" by Serge I noticed something. Nobody else has mentioned this at time of writing. So I thought it might be a good idea to explain a little about why a joiner model works well for quadrats/cluster sequences and why fears about extendibility may be misplaced.

All Roads lead to Rome

A few lines into his proposal Serge mentioned the quadrat  . He later gives its sequence using "repeat codes" as  . Now here's the thing. If you replace with  then replace the single with  then finally with  what you see is  .

Yes, these are the group joiners.

This is not a conjuring trick. Hidden behind the difference in notations there is a similar (mathematically speaking) encoding model. Nothing new is added in a functional sense.

Where the "repeat codes" model starts with * and : then adds ** and :: then *** and ::: to support deeper and deeper levels of nested groups, the joiner model adds a further 2 controls for each level required.

We are only human

Not all notations are equal. 'Repeating operators' may make sense until you start to consider what can go wrong. What if you delete one of the codes? What if you insert a code between two hieroglyphs or into a series of codes? Basically how well will it work when editing hieroglyphic as a complex script. Then ask is how readable is the control sequence to the human eye?

The fact that the joiner approach uses different operators is a big plus. At the top level there is the **quadrat** which may be a hieroglyph, a **group**, or an arrangement of groups using group joiners. Next there is the group - the bread and butter of the script. The fact we have the quadrat and group concepts to refer to make the notation easier to understand by non-technical users. By calling everything a group as 'repeating operators' does we lose a richness of language and function that the group/quadrat distinction makes.

Suppose there is the evidence that another level of nesting in needed for plain text (a motivation for 'repeating'). Then we simply add two new operators to the joiner model and give the arrangement a name so we can talk about it. Next level relative to the group in my private work I call it a **snark**. So, if we want to add snark support to the joining model we just add two new controls:

EGYPTIAN HIEROGLYPH SNARK HORIZONTAL JOINER
EGYPTIAN HIEROGLYPH SNARK VERTICAL JOINER

The snark certainly exists (there are attested examples). I didn't add snark support to my latest discussion of group joiners as I don't have enough evidence to characterize it yet. A simple HLP can be used if necessary in the meantime – I use () brackets.

The Hunting of the Snark

I've been calling for evidence to characterize structures such as the snark for a long time. It is not sufficient to know one or two exist. Are these necessary for Unicode at this time? Are they hapax or a fundamental part of the writing system. I think we know most groups aren't used as snarks.