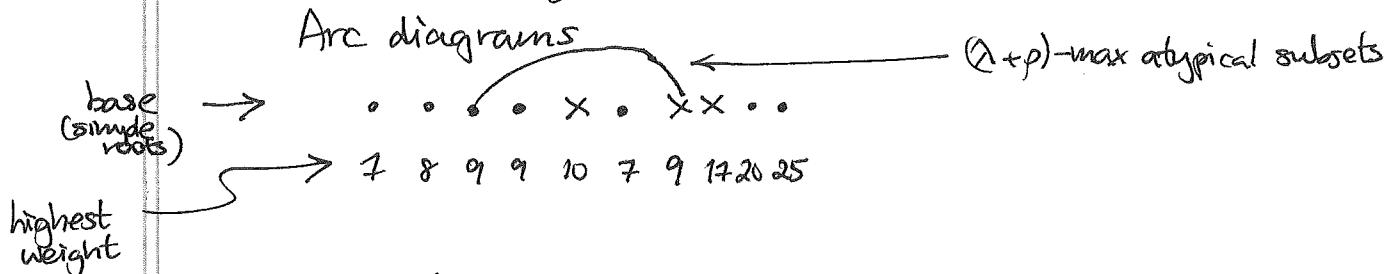


C.P.S. Mike Chmutov 10/24/14

Comb. model for $gl(m/n)$ repns.



- arcs go between •'s and x's
- arcs have disjoint support
- arcs go between same #'s
- want the set of arcs to be maximal satisfying these constraints

Moves (that keep the rep'n the same):

(1) Change arcs

$$(2) \begin{array}{c} \bullet \\ a \end{array} \neq \begin{array}{c} x \\ b \end{array} \iff \begin{array}{c} x \\ b \end{array} \neq \begin{array}{c} \bullet \\ a \end{array}$$

$$(3) \begin{array}{cc} \bullet & x \\ a & a \end{array} \iff \begin{array}{cc} x & \bullet \\ a+1 & a+1 \end{array}$$

e.g. • • • x x • • x • •
 7 8 9 10 10 9 7 17 20 25

represents the same rep'n.

Dominance condition:

$$\text{in any base } \begin{array}{c} m \\ a \end{array} \begin{array}{c} n \\ b \end{array} \Rightarrow a > b$$

$$\begin{array}{c} m \\ a \end{array} \begin{array}{c} n \\ b \end{array} \Rightarrow a < b$$

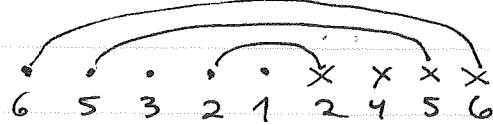
(enough to check when
....xxx)

Interesting cases ("tame repns")

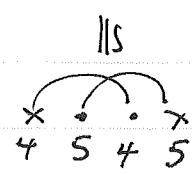
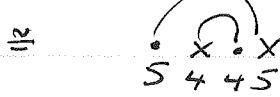
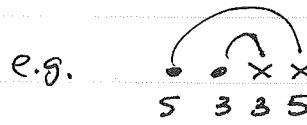
When it is possible to make all arcs short

$$\begin{array}{c} m \\ a \end{array} \curvearrowright \begin{array}{c} m \\ b \end{array} \begin{array}{c} n \\ c \end{array} \curvearrowright \begin{array}{c} n \\ d \end{array}$$

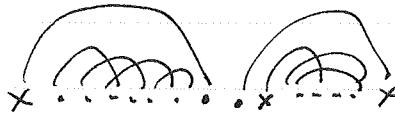
THM (C.-Hart-Reif) Tameness occurs precisely when in the standard base



all numbers between arcweights appear somewhere

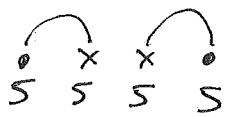


THM 2:



2 outermost arcs \Rightarrow tame.

CONJ: For a tame weight, in any base there exists a noncrossing arc arrangement



5 5 4 4