

By induction <sup>want to prove:</sup>  $a_w \dots a_{w+n} \downarrow_{a < w < c} a_{< w+n}$ . (\*)

For  $n=0$  ✓.

z/-

For  $n+1$  we have  $a_{< w+n+1} \downarrow_{a < w < c} a_{> w+n+1}$ .

(\*)<sup>trans</sup>  $\Rightarrow a_w \dots a_{w+n} \downarrow_{c \ a < w \ a_{w+n+1}} a_{> w+n+1}$

<sup>trans</sup>  
 $\Rightarrow$   ~~$a_w \dots a_{w+n}$~~   $a_w \dots a_{w+n+1} \downarrow_{c \ a < w} a_{> w+n+1}$ .