

# Effects in RSiena: assignment

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There are two assignments,  
one for a network effect and one for a behavior effect.

The assignment is to construct the new effect.

Perhaps it is helpful to follow the steps  
as in Chapter 18 of the [Siena](#) manual.

## network effect

For a network variable  $X$  and an actor variable  $V$ :

the interaction between ego's value  
and the maximum of alter's value and ego's value,  
for all alters to whom ego has a tie:

$$s_i(x) = v_i \sum_j x_{ij} \max(v_j, v_i) .$$

Interpretation: ego is attracted to alter more strongly  
to the extent that alter's value is higher than ego's.

# behavior effect

For a behavioral variable  $Z$ :

left-to-threshold shape effect:

$$s_i(z) = I\{z_i \leq p\}$$

for an internal effect parameter  $p$ .

Interpretation:

attractiveness of the behavior depends on whether it is less than, or equal to, a certain value.