send	$i \longrightarrow j$	i has sent j a message in the past
receive	$i \longleftarrow j$	i has received a message from j in the past
2-send	$i \longrightarrow h \longrightarrow j$	there exists an actor h such that i has sent h a message and h has sent j a message in the past
2-receive	$i \longleftarrow h \longleftarrow j$	there exists an actor h such that i has received a message from h, and h has received a message from j
sibling		there exists an actor h such that h has sent i and j messages in the past
cosibling		there exists an actor h such that h has received messages from i and j

Fig. 3. Dynamic covariates to measure network effects