This is labelled transition system (LTS):

$$LTS = s_0 \xrightarrow{l_0} s_1 \xrightarrow{l_1} \dots \xrightarrow{l_{n-1}} s_n$$

s are states and arrows are changes applied to those states and they are labelled with ($l_{0,}$ ..., l_{n-1}). In the bigraphs theory states are bigraphs and reaction rules are equivalents of labels. In a reactive system a context may participate, it may include part of a redex. In the case that given bigraph includes only part of the redex, the context must provide the rest of it. This relation between redex and a composition bigraph and context is shown in Fig. 1a). and Fig. 1b).

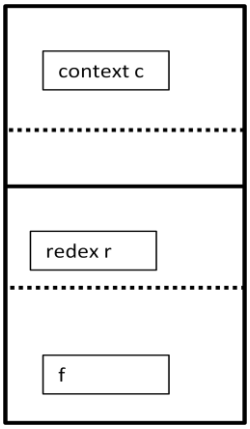

Fig. 1. redex as part of bigraph and its context

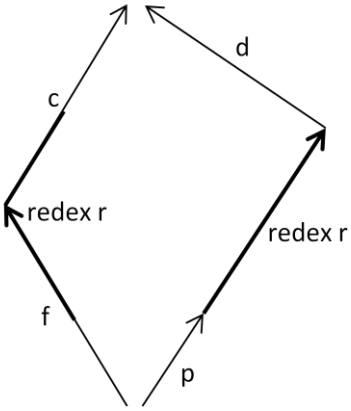

Fig. 1b)

This is slightly different than Milner's theory. Milner's redex is ground bigraph. Here, redex is composed over a parameter. This allows the redex to be an arbitrary bigraph.

We can observe, that (f, r ◦ p) forms a span and (c, d) forms the bound for this span. As c can be arbitrary big, so does d. Since RPO is guaranteed minimal bound for a given span, hence RPO may give us the minimal context c and d here.