Input: state $\boldsymbol{b}, n^{(X)}, n^{(Y)}, n^{(Z)}$, intermediate Outside matrix β
emitProb $\leftarrow 0$;
foreach $\boldsymbol{a} : \exists\, \boldsymbol{a} \rightarrow \boldsymbol{b}$ **do**
  emitProb += $P(\boldsymbol{a} \rightarrow \boldsymbol{b})\ \beta_{\boldsymbol{a}}\left(n^{(X)}, n^{(Y)}, n^{(Z)}\right)$;
end
foreach $\boldsymbol{a} : \exists\, \boldsymbol{a} \rightarrow \boldsymbol{l}\,\boldsymbol{b}\,\boldsymbol{r}$ **do**
  if $c_{out}\left(\boldsymbol{b}; n^{(X)}\right) \notin \mathscr{F}^{(X)}$ *or* $c_{out}\left(\boldsymbol{b}; n^{(Y)}\right) \notin \mathscr{F}^{(Y)}$ *or* $c_{out}\left(\boldsymbol{b}; n^{(Z)}\right) \notin \mathscr{F}^{(Z)}$ **then** next;
  emitProb += $P(\boldsymbol{a} \rightarrow \boldsymbol{l}\,\boldsymbol{b}\,\boldsymbol{r})\ \beta_{\boldsymbol{a}}\left(c_{out}\left(\boldsymbol{b}; n^{(X)}\right), c_{out}\left(\boldsymbol{b}; n^{(Y)}\right), c_{out}\left(\boldsymbol{b}; n^{(Z)}\right)\right)$;
end
return emitProb;