

$$\begin{smallmatrix}??\\??\\??\end{smallmatrix}$$

$$\begin{array}{l}uT|T|W_u=\\ \{w_u(t)\}|W_u\in\\ R^{|T|},\sum_t w_u(t)=\\ 1w_u(t)t\\ utS|S|O_t=\\ \{d_{u,t}(s)|O_t\in\\ R^{|S|},\sum_s d_{u,t}(s)=\\ 1\}d_{u,t}(s)s\end{array}$$

$$\begin{array}{l}??[0,100][0,8]\\ (w_{u,2}=0.08,w_{u,32}=0.48,w_{u,83}=0.44)\end{array}$$

$$O_2=(d_{u,2,4}=0.5,d_{u,2,5}=0.5)$$

$$O_{32}=(d_{u,32,4}=1.0)$$

$$O_{83}=(d_{u,83,4}=0.5,d_{u,83,5}=0.5)$$

$$\begin{array}{l}M_uTM=\\ (\theta,\phi)\theta T\phi tt\end{array}$$

$$z_t=\arg\max_k\prod_{w\in t}P(w|\phi_k)$$

$$(1)_{uu}$$

$$w_{u,k}=|\{t:t\in M_u\wedge z_t=k\}||M_u|$$

$$(2) \quad \begin{array}{l}??Sts_tk\end{array}$$

$$\begin{array}{l}O_k=\{d_{u,k,s}|s\in S\}\\ =\{ |t:t\in M_u\wedge z_t=k\wedge s_t=s||M_u||s\in \mathfrak{S}\}\end{array}$$

$$\begin{array}{l}??S=\\ [0,8]O_k^1O_k^2O_k^3\\ O_k^1\\ O_k^2\\ O_k^3\\ O_k^2O_k^3O_k^1O_k^3O_k^u,O_k^v\end{array}$$

$$Sim(O_k^u,O_k^v)=|S|-|\sum_{i=0}^{|S|}d_i^uv_i-\sum_{i=0}^{|S|}d_i^v v_i||S|$$

$$(4) \quad \begin{array}{l}d_i i^{th} v_i\\ ????\end{array}$$

$$Sim(O_k^1,O_k^3)=0$$

$$Sim(O_k^2,O_k^3)=6/8$$

$$Sim(O_k^1,O_k^2)=2/8$$

$$TSM_uSM_v$$

$$Sim(SM_u,SM_v)=\sum_{k=1}^{|T_{u,v}|}\theta_u(k)Sim(O_k^u,O_k^v)$$

$$(5) \quad \begin{array}{l}T_{u,v}\theta_u(k)uk\\ uvuSim(SM_u,SM_v)\neq\\ Sim(SM_v,SM_u)\\ tFu_a u_a tFt f\in\\ F<\\ f^u_a,t,r_f>r_f t f\\ t f z_t ?? s_t t f ??\end{array}$$

$$Sim(f,t)=\theta_f(z_t)Sim(O_{z_t}^f,O_{z_t}^t)$$

$$(6)_{fu_a}$$

$$Sim(f,u_a)=\sum_{k=1}^{|T_{u,v}|}\theta_f(k)Sim(O_k^f,O_k^{u_a})$$