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$$\begin{aligned} & \{u_i\}E = \\ & \{(u_i, u_j) | u_i, u_j \in V\}M_i = \\ & \{m_i\}T = \\ & \{Topic_j\}u_i \\ & Topic_jO_{i,j}m_iTopic_jM_i = \\ & \{m_i\} \\ & G = \\ & (V, E)VE \subset \\ & V \times \\ & V \in \\ & V \\ & M_uT \\ & V \in \\ & u \in \\ & V \text{subjectivity}M_u \\ & uP(u)T\{t\}\{O_t\}S \end{aligned}$$

$$\begin{aligned} (1) \quad & P(u) = \{(t, w_u(t), \{d_{u,t}(s) | s \in S\}) | t \in T\} \\ & uw_u(t)t \in \\ & T \sum_{t=1}^{|T|} w_u(t) = \\ & 1 \\ & utO_tSO_t = \\ & \{d_{u,t}(s) | s \in \\ & S\} \sum_{s=1}^{|S|} d_{u,t}(s) = \\ & 1 \\ & \theta_u \sim \\ & Dir(\alpha) \\ & w_{u,n}n \in \\ & \{1, \dots, N\} \\ & z_{u,n} \sim \\ & Multinomial(\theta_u) \\ & z_{u,n}w_{u,n} \\ & p(w_{u,n} | z_{u,n}, \beta_k) \\ & VKu \in \\ & V\theta_u \alpha k \in \\ & K\beta_k \eta \\ & ? \\ & ? \end{aligned}$$

$$\begin{aligned} (2) \quad & o = \{p + 3 \text{ if } |p| > |n|n + 5 \text{ if } |n| > |p|4 \text{ if } |p| = |n| \\ & pn[0, 8][0, 8] \\ & VM_u = \\ & \{m_i\} \\ & u \in \\ & VM_u d_u \{d_u | u \in \\ & V\}K \\ & \theta T \beta \\ & ms_m \\ & uP(u)?? \\ & V \\ & M_u \\ & u \\ & P(u) \\ & P(\theta, \beta | M_u, V) \\ & m \in \\ & M_u \\ & m \\ & s_m \\ & u \in \\ & V \\ & \theta \\ & \theta_u \\ & Z_u = \\ & \{t | p(t | \theta_u) > 0, t \in T\} \\ & m \in \\ & M_u \\ & m \\ & Z_m = \{t | p(t | \theta, \beta, Z_u) > 0, t \in T\}. \end{aligned}$$

$$(3) \quad \begin{aligned} & t \in \\ & Z_u \\ & s \in \\ & S \\ & t \end{aligned}$$