3. To define $b_3(m)$, for each $v' \in V$ in the case of $u \neq 0$ first define:

$$b_{3,v'}(m) := \begin{cases} 1, & \text{if} \quad (v,v') \in E \\ & \quad \text{and} \quad \exists\, B' \in \mathcal{B}_{v'}\colon\ |B_u \cap B'| \neq 0 \\ & \quad \text{and} \quad \forall\, B' \in \mathcal{B}_{v'}\colon\ B_u \neq B'; \\ 0, & \text{in all other cases.} \end{cases}$$

In the case of $u \neq 0$ further define:

$$g := \left| \{ v' \in V \mid (v,v') \in E,\ \exists\, B' \in \mathcal{B}_{v'}\colon\ |B_u \cap B'| \neq 0 \} \right| .$$

Now set:

$$b_3(m) := \begin{cases} \dfrac{\sum\limits_{v' \in V} b_{3,v'}(m)}{g}, & \text{if } u \neq 0 \ \text{ and } \ g > 0; \\ 0, & \text{otherwise.} \end{cases}$$

Interpretation: The sum $\sum_{v' \in V} b_{3,v'}(m)$ measures the number of possible SFN-situations, the source ensemble B_u of the elementary move m could make use of, but has not yet done so. In our context, we understand a SFN-situation to be any two adjacent and equal ensembles. We obtain the value $b_3(m)$ from $\sum_{v' \in V} b_{3,v'}(m)$ by dividing out the problem size appropriate and represented by the value g.

Having introduced $b_1(m)$, $b_2(m)$ and $b_3(m)$, we can now define the relations "$\equiv$" and "$\lhd$". For this, let again $\mathcal{B}$ be an ensemble assignment, and let $m_1, m_2 \in M(\mathcal{B})$ be two elementary moves on $\mathcal{B}$.

1. We say that m_1 and m_2 are equivalent, $m_1 \equiv m_2$, if $\exists\, i \in \{1, \ldots, 3\}$ that the following property holds:

$$\big(b_j(m_1) = b_j(m_2) = 0 \text{ for } j = 1, \ldots, i-1\big) \ \text{ and } \ \begin{cases} b_i(m_1) = b_i(m_2) > 0, & \text{if } i < 3. \\ b_i(m_1) = b_i(m_2) \geq 0, & \text{if } i = 3. \end{cases}$$

2. We say that m_1 is smaller than m_2, $m_1 \lhd m_2$, if $\exists\, i \in \{1, \ldots, 3\}$ that the following property holds:

$$\big(b_j(m_1) = b_j(m_2) = 0 \text{ for } j = 1, \ldots, i-1\big) \ \text{ and } \ b_i(m_1) < b_i(m_2).$$