1 Assignment Modification

Recall that for any assignment $a$, $a[i → c]$ (for any $i ∈ \mathbb{N}$ and $c ∈ D_e$) is the assignment that can only be different from $a$ in that $a[i → c]$ maps $i$ to $c$. Formally:
- $a[i → c](i) = c$ and;
- $a[i → c](j) = a(j)$ for each $j ∈ \mathbb{N}$ different from $i$.

Here, $a$ itself may be a modified assignment, as in $g[1 → John][2 → Moscow]$, where $a = g[1 → John]$.

Take the assignment $b$: $N → D_e$. To simplify, we only represent 1, 2 and 3.

\[
b = \begin{bmatrix}
1 & → & Sue \\
2 & → & Bob \\
3 & → & London
\end{bmatrix}
\]

The modified assignment $b[1 → John]$ looks like:

\[
b[1 → John] = \begin{bmatrix}
1 & → & John \\
2 & → & Bob \\
3 & → & London
\end{bmatrix}
\]

For the same assignment $b$, represent the following modified assignments in the same format.

i) $b[2 → Bob]$ =

ii) $b[1 → John][3 → Berlin][2 → Mary]$ =

iii) $b[3 → Paris][3 → Moscow]$ =

2 Relative Clause and Predicate Abstraction

Compute the denotation of the following sentence relative to assignment $a$ and model $M$ (top-down recommended). Please do not omit any step. You may use the bracket notation.

Some lexical entries: for any assignment $b$,

- $[\text{John}]^{b,M} = j$
- $[\text{Mary}]^{b,M} = m$
- $[\lambda x ∈ D_e. 1 \text{ iff } x \text{ is a linguist in } M]$
- $[\lambda y ∈ D_e. 1 \text{ iff } y \text{ admires } x \text{ in } M]$

(is, $a$ and $C$ are semantically vacuous, i.e. they denote identity functions).