Wheeling?

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8:07 PM

$$\eta = \sum c_i \alpha_{iy} \qquad j(\zeta) = \frac{e^\zeta - 1}{\zeta} \Rightarrow$$

$$j(\eta)\eta = \sum c_i\, j(\eta)\alpha_{iy} = \sum c_i \tilde{\alpha}_{iy}$$

$$e^\eta - 1 = \sum c_i \tilde{\alpha}_{iy} \qquad \tilde{\alpha} = j(\eta)\alpha$$

$$\eta = \log\left(1 + \sum c_i \tilde{\alpha}_{iy}\right) \quad \text{so} \quad j(\eta) = \frac{\sum c_i \tilde{\alpha}_{iy}}{\log(1 + \sum c_i \tilde{\alpha}_{iy})}$$

In this language,

$$\beta_{iz} = \frac{1}{j(\zeta+\eta)}\left(j(\zeta)\alpha_{ix} + e^\zeta j(\eta)\alpha_{iy}\right)$$

becomes

$$\tilde{\beta}_{iz} = \tilde{\alpha}_{ix} + \left(1 + \sum c_j \tilde{\alpha}_{jx}\right)\tilde{\alpha}_{iy}$$

$$= \tilde{\alpha}_{ix} + \tilde{\alpha}_{iy} + \left(\sum_j c_j \tilde{\alpha}_{jx}\right)\tilde{\alpha}_{iy}$$

It would be nice to verify associativity here directly.

The simplification here is potentially so major it cannot be ignored.