Merging of path generators

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By interpreting paths as partial function products, it is possible to derive rules for merging path generators. In general for asymmetric path semantics, using Nilsen cartesian product notation:

$$f[g_{i \to n}][h_{i \to n}] <=> f[h_i \cdot g_i \to h_n \cdot g_n]$$

A short hand version can be written as:

$$f[g_{i \to n}][h_{i \to n}] <=> f[(h \cdot g)_{i \to n}]$$

This is easily convertible to symmetric form, by erasing index information.

Intuitively, if `$g_{in}: A_{in} \to B_{in}$` and `$h_{in}: B_{in} \to C_{in}$` then `$(h \cdot g)_{in}: A_{in} \to C_{in}$`.

Of course, this depends on whether both paths `$f[g_{i \to n}]$` and `$f[g_{i \to n}][h_{i \to n}]$` exists.

Merging of path generators corresponds to composition of the generators on partial function products.