Recursive Defor of Concat

Let the alphabet be denoted Σ . Recall defin:

A "string over
$$\Sigma$$
" is given by:

1. ε is a "string over Σ "

2. if ε is a "string over Σ ", then so

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Nothing else is a "string over ε "

Let S, and S2 be strings over Z".

$$S_1 \circ S_2$$
 is given by

1. If $S_2 = \mathcal{E}$ then $S_1 \circ S_2 = S_1$

2. If $S_2 = SO$ for some "string over Ξ " S and some $S \in \Sigma$, then $S_1 \circ S_2 = (S_1 \cdot S) \circ S_1 \circ S_2 = (S_1 \cdot S) \circ S_1 \circ S_2 = (S_1 \cdot S) \circ S_2 \circ S_1 \circ S_2 = (S_1 \cdot S) \circ S_2 \circ S_1 \circ S_2 \circ S_1 \circ S_2 \circ S_1 \circ S_2 \circ S_1 \circ S_2 \circ S_2 \circ S_1 \circ S_2 \circ S_2 \circ S_2 \circ S_1 \circ S_2 \circ S_2 \circ S_2 \circ S_1 \circ S_2 \circ S_1 \circ S_2 \circ S_2 \circ S_1 \circ S_2 \circ S_2 \circ S_1 \circ S_2 \circ S_2 \circ S_2 \circ S_1 \circ S_2 \circ S_2 \circ S_2 \circ S_2 \circ S_1 \circ S_2 \circ$