Connecting Semantically Related Structures

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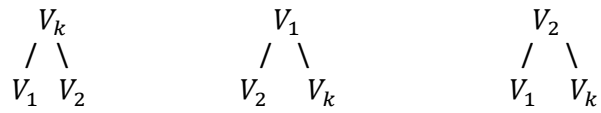
Let us start with the V-particles V_k, V_1 and V_2 which are not composite and are ***related*** semantically. How to connect them?



What does it mean for two primitive V-particles V_1 and V_2 to be *related* semantically? Note that there is a difference between the terms *related semantically* and *semantically close*. The difference will become clear with the discussion here.

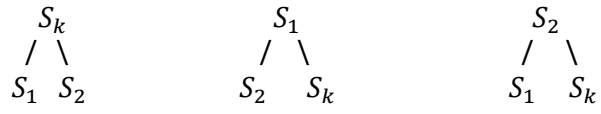
----needs clarification – should we do quantization in terms the new compound property color or energy levels makes more sense

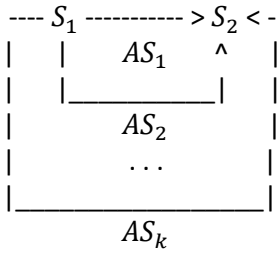
There should be sufficient attraction force $F^a(V_1, V_2)$ between them in at least one of the possible connectivity DAGs.

But what is this mysterious attraction force? How is it represented? Let us denote by G the smallest DAG which includes both V_1 and V_2.

The engagement of the V-particles in a parent-children ensemble is based on the property ***color***. The property ***color*** is a compound property of primitive V-particles. ***Color*** is made of a specific set of property keys forming a ***color basis***. Each primitive V-particle has a subset of property keys from the color basis. The parent-children ensemble like the ones depicted above are possible only when the colors of the participating particles are matching the expected color for the position (tree node) of each particle in the ensemble.

Let us have the structures S_k, S_1 and S_2 which are close semantically. How to connect them?





$AS_1, AS_2, \ldots, AS_k$ – directed association links connecting S_1 to S_2

The structure of an association link

Association link connects two V-particles on two different semantic structures.