New Standard Order for Levels

by Sven Nilsen, 2021

In this paper I introduce a new standard for the order of path semantical levels.

Previously, path semantical layers of propositions in Path Semantical Logic[1] was decreasing from left to right. This is reversed in the new standard order for levels of 2021.

In the new standard order for levels of 2021, levels increases from left to right.

For example:

```
(a, b) (C, D):
<proof>
```

Here, the tuple `(a, b)` had previously level 1 and the tuple `(C, D)` had previously level 0.
The new standard assigns the tuple `(a, b)` level 0 and the tuple `(C, D)` level 1.

Previously, `(C, D)` was said to have lower level than `(a, b)`.
The new standard assigns `(a, b)` lower level than `(C, D)`.

The existing proofs are unchanged. Only the numerical values of levels changes.

The motivation for the new standard is that it is more natural to start at level 0 and increase levels from left to right. This holds both for the Time Interpretation[2] of Path Semantical Logic and constructive formalisation[3] of Path Semantical Logic.

All papers prior to 2021 will be updated with a comment and reference to this paper.

References:

[1] “Path Semantical Logic”
AdvancedResearch – Reading sequence on Path Semantical Logic
https://github.com/advancedresearch/path_semantics/blob/master/sequences.md#path-semantical-logic

[2] “Time Interpretation”
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https://github.com/advancedresearch/path_semantics/blob/master/papers-wip2/time-interpretation.pdf

[3] “Prop – Propositional logic with types in Rust”
AdvancedResearch
https://github.com/advancedresearch/prop