Creation Theorem

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In this paper I present one creation theorem found in Path Semantical Logic.

The Creation Theorem is the following:

(a b) (A B):
¬a ∧ (b => B) => (A => B)

Here, the tuple `(a b)` has level 0 and the tuple `(A B)` has level 1 (2021 standard order[1]).

The word “creation” comes from the Time Interpretation[2] of Path Semantical Logic[3]:

1. Before the universe came into existence, nothing happened, `¬a`.
2. Instead of nothing happening, something `b` could have caused something `B` (`b => B`).
3. When nothing happens it causes everything `a => A`, since `false => A`.
4. Nothing happening relates to something that could have happened `a => b`, since `false => b`.
5. Therefore, using the Implication Theorem[4], `A => B`.

With other words, the Creation Theorem follows from the Implication Theorem.

What makes the Creation Theorem special is that in level 1, `A => B` is a structure of being.
This structure was created from nothing, or nothing happening.

There was no structure of being before the universe came into existence,
yet what was *not happening* created the universe.
The universe is a witness that nothing happened before it came into being.

Another view is that the Creation Theorem shows how symmetry is broken between `true` and `false`. In normal Propositional Logic[5] (PL), there is no difference between adding an extra parameter, e.g. `x` and set it to `x = true` or `x = false`. This means that PL is symmetric with respect to `true` and `false` in independent variables. However, in Path Semantical Logic the Creation Theorem does not introduce new relations from `x = true`, but it does through `x = false`. This means the symmetry is broken between `true` and `false`.

References:

[1] “New Standard Order for Levels”
Sven Nilsen, 2021
https://github.com/advancedresearch/path_semantics/blob/master/papers-wip2/new-standard-order-for-levels.pdf

[2] “Time Interpretation”
Sven Nilsen, 2021
https://github.com/advancedresearch/path_semantics/blob/master/papers-wip2/time-interpretation.pdf

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

[4] “Implication Theorem”
Sven Nilsen, 2020
https://github.com/advancedresearch/path_semantics/blob/master/papers-wip/implication-theorem.pdf

[5] “Propositional calculus”
Wikipedia
https://en.wikipedia.org/wiki/Propositional_calculus