Order consistent context

Shigeo Hattori

November 13, 2019

First revision: November, 2019

bayship.org@gmail.com

https://github.com/bayship-org/mathematics

1 Prerequisite definitions

GitHub:Minor_of_memBer.pdf

In the article above, in its first two pages, all prerequisite definitions for this article are given. Especially, the second page of the above article defines that:

- A **memBer** as a member of a set.
- Deep members y of a memBer x is calcurated **the deep number relative to** x.
- Two memBers (x, y) are said (x is a **minor** of y).

2 Notations

Definition 2.1.
"And" is also written as " $_{and}\wedge$ ".
"Or" is also written as " $_{or}\vee$ ".

$(x \ \ _{and}\wedge \ y)$ is not commutative because y possibly depends on x.
$(x \ \ _{or}\vee \ y)$ is not commutative because y possibly depends on $\neg x$. ■

3 Order consistent

Definition 3.1 (Order consistent)**.**
Take $\forall L$ as a logical expression such that (*1 implies *2).

Then L is said order consistent.

1. Take $\forall(f, p, q, r, d)$
such that (*s1 ${}_{and}\wedge$ ..... ${}_{and}\wedge$ *s3) holds.

s1. L defines (f, d) as a function f and a partial order d.

s2. $\{p, q, r\} \subset \mathrm{domain}(f)$.

s3. In terms of d,
$p < q < r$.

2. In terms of d,
$f(p) \leq f(q) \leq f(r) \vee f(r) \leq f(q) \leq f(p)$. $\blacksquare$

4 Consequent context of antecedent context

Take $\forall D$ as a definition. Then D is said an antecedent context if: D is independent.
Take $\forall A$ as an antecedent context.
Take $\forall D$ as a definition. Then D is said a consequent context of A if: (if D is dependent of at most A).
Take $\forall C$ as a consequent context of A.

Take $\forall x$ as a variable of C. Then x is said **specified for all instances of** A if (
x is specified if you assume that all variables of A are specified).
For example, let A define $\forall n :\in \mathbb{N}$ and C define $x := n + 1$. Then x is specified for all instances of A because if n had been specified in A then x is specified.

5 Conjecture

Conjecture 5.1 (Conjecture)**.**
Take $\forall(n, X, T, M)$ as the Euclidean space (X, T, M) of n-dimension where X is the space, T is the topology and M is the metric table.
As a remark, for the set of all orthogonal coordinate systems for the space, no absolute member is defined.
Let $A := (n, X, T, M)$.
Take all (C, x) such that (*1 ${}_{and}\wedge$ *2 ${}_{and}\wedge$ *3).
Then x is a minor of T.

1. C is a consequent context C of A.

2. x is a variable of C.

3. C is order consistent.

6 Examples

This section just gives examples of substituting actual values into variables of the main conjecture.

Definition 6.1 (Unknot)**.**
Refer to the main conjecture for (n, X, T, M).
For the main conjecture, this example substitutes values
into (n, x) as $(*0 \ {}_{and}\wedge \ ..... \ {}_{and}\wedge \ *7)$.

0. Let $n := 3$.

1. Take $\forall k1$ such that (
   Space$(k1) \subset X \ {}_{and}\wedge$
   $k1$ is said an unknot on (X, T, M)
).

2. Let $K := \{k \mid ((T, k), (T, k1))$ are isomorphic $\}$.

3. Take $\forall k :\in K$.

4. $f1(k) := \{d \mid d$ is a proper knot diagram of $k\}$.

5. $f2(k) := \{r \mid$
   $\exists d :\in f1(k) \ {}_{and}\wedge$
   r is the number of crossings on d
   $\}$.

6. $f(k) :=$ "the maximum number of $f2(k)$.

7. $x := \{k \mid f(k) = f(k1)\}$.