5th Class

The rules of procedure used in Otology

There are seven rules of procedure. They are very simple in practice.

The first two concern def.

A def is not an abbreviation, but a name given to the system, according to the rules established by these two rules.

\[ A \rightarrow B \]

The other way, if \( A \rightarrow B \) is true, then \( B \rightarrow A \), or vice versa.

We have no rules of use of def in our system. The def are there to the other rule take care of this. We use def in the
Luschi - see this book for an explanation of the rules.

...some way as any other proof. Theore.

...All help are constructed as equivalence.

\[ A \equiv B \]

\text{definens \ definendum.}

RI is a rule about protothetical dump. \[ s \vdash \top \]

Protothetical def since

\[ [a, \ldots, a] \vdash A(a_0, \ldots, a_n) \equiv \varphi(a_0, \ldots, a_n) \]

...new defined const. & model it.

...a set which has a sense.

...already in our language. Any it constitutes a prop form.

...\text{eg in PC.}

...E NPpq \land Kpq \iff K.

...we define a prop form function.

...Any variable in definendum host to occur

...these only once. Any variable in definendum

...is free there & cannot occur as a free
\[ 0 = 0 \cdot 1 \text{ is a cot df with no variables at all.} \]

Variables in definiens. They may occur several times in definiens. Also several bound variables may occur in definiens.

Any expression in \( A \) must belong to a set not already occurring in our system. Such def can be unrestricted.

Any variable free in definiens of definiens are bound by a general quantifier which proceeds every thing.

No there is no free variable.

Suppose you have no free variable in definiens or definiens (once only in \( \phi \)). These variables have to be bound by parentheses. The \( \phi \) must have the form

\[ \phi(x_1, \ldots, x_n) \]
9. an need not belong to the same
sem cat. You can divide these variables
in as many group as you like to put them
in pairs. The same can be done in PC
to Proteteh.

Take eg. conjunction for 3 variables.

It is common sym. So we can order the
variables in any way.

\[ \neg p \land \neg q \iff \neg (p \lor q) \]

prop variables.

In prop form but for 2 prop vars

\[ \neg p \lor \neg q \]

This \( \neg p \lor \neg q \) belong to different sem cats.

very easily we can define

such combination:
\[ p + \frac{q}{r} \]

\[ p + \frac{q}{(r)} \]

\[ p + (\frac{q}{r}) \]

\[ p + (q) \]

This you can cut our string of variables in as many pieces as you like it ordered then as we like adding different parentheses.

\( \Lambda \) belongs to rest of group from factor for 3 group args.

\( \Lambda (pq) \) is group form factor for 1 group arg.

This is not a constant but some function of two variables.

\( \Lambda _1 \) is function form function for two group args which together need these two args form a group form function for one group arg.
Anyone can see that $A_1, A_2, A_3$
belong to different sets.

This is used very often in mathematics.

It is investigating a joint of 3 sets, but is
intended only in one arg. Then he
put two variables in parentheses.

To have a full theory of some sets, you
need the possibility of splitting the variable
of a function. This is often times necessary
in practice. This device is used in math
and other branches of logic.

Schoenfliess gave this device at the
1921 conference of some set of the

Schoenfliess ideas were used
by Church in his construction of the 2 calculus
of Princeton mimeographs.
This atr calculus is about combinatorial logic

of Curry (which he will present in '66).

\( \Lambda(qq) \) can be split only as

\[ \Lambda, \, t(p+q) \]

6 \( \Lambda_2(q+q) \) (p)

But \( \Lambda_1 \) & \( \Lambda_2 \) are the same function

since \( \Lambda \) is commutative.

\( q \) is a new constant. Not necessarily

belonging to a new sem set. It can

belong to an already defined sem set.

If we define \( \Lambda(qq) \) (using \( C, N, \) \( A \)).

6 let:

\[ D(qq) \]

Then \( A \) & \( D \) belong to the same sem set.

We must use different symbols

(we use \( A \) \& \( B \)).
We can (in fiction) define a function of a semi-set such as 
log(\( p \)) + \( p \) (as a function defined previously) but of a 
different set. Then it is convenient 
to use the same symbol, 
e.g. we write \( N(pq) \) or \( N(pq) \).

The same symbol \( N \) is convenient as 
with our convention. We distinguish 
the two by the variables, parentheses, 
their form, arrangement & number.
This enables us to establish the 
semi-set immediately.

\[ N(pq) = N(p + q) \]

The two \( N \)'s are different as the numbers 
parentheses are different.
This is the prototypical type of def.

If such a thing is a well-constituted def, then we can add it (the thing) to the system as a them.

These are called many-link def's.

The second type of def's are the Ontological def's.

\[ \{a_1, \ldots, a_n \mid A(x, a_1, \ldots, a_n) \land B \Rightarrow x \in \Phi(a_1, \ldots, a_n) \} \]

All of the previous conditions for proto def's hold.

But we must have one more thing.

\[ a_n \ldots a_1 \text{ may again be arranged in many links} \]

in such a fashion. Our definitions define not a single fact, but a semantic fact.

It is a def if either it is a conj or not.

\( x \) is a variable if it is used in the place of the subj. of an individual proposition.
The odd condition of construction of Det.
def says that it is a con. that sees
a must occur as a subject of an
individual prop which is a function of
props. If not we must add a for a
3 of the form \( x \in L \).

eg \((x \in x)\) will do.

or \( F a \).

This must be done in order to
avoid any logical antinomies.

This makes the Russell antinomy impossible.

D \( \exists ! x. x \in x \iff \neg (x \in x) \).

This if is ok, but no * results.

The definition must not be stronger
than the definition, i.e. if you can establish.
Something is on individual in one then you must
be able to do this in the other also.

This condition is easy to apply. This is the second rule.
Now a discussion of the remaining rules.

II. Evidently point to a rule in Piaget-thean of a rule which is unique in our course.

A single rule concerning the use of Quant.

All other rules of Quant. follow from it, except the rule of exhaustiveness,

\[ \{a_1, \ldots, a_n\}; \psi \equiv \psi \]

Say we have this already proved. Then when \( a_1, \ldots, a_n \) (poss of different sets) occur MGF.

The rule says you can distribute either all or some of these variables in MGF

across the \( \equiv \) sign.

I get \( \{a_1, \ldots, a_n\}; \psi \equiv \{a_1, \ldots, a_n\}; \psi, \)

or get \( \{a_{k+1}, \ldots, a_n\}; \psi \equiv \{a_1, \ldots, a_k\}; \psi, \psi \equiv \{a_1, \ldots, a_k\}; \psi \)

\( k < n \)
In this system, the variables are unordered in the quanta. There are no numerous quanta.

So, we must have

\[ [q_{k+1}, \ldots, q_n]; [q_k, \ldots, q_{k-1}]; \psi(-a_k) \equiv [q_k, a_k, \ldots] \psi. \]

If \( a_k \) does not occur in \( \psi \), we can get

\[ [q_k, a_k, \ldots]; \quad \psi(-a_k) \equiv [q_k, \ldots] \psi. \]

In this system, you have no particular quanta.

\[ \neg a \] \( \psi(a) \) is only an abbreviation

\[ \neg \sim (\neg a \sim (\psi(a))). \]

The particular quanta is not introduced formally simply because really, speaking, we can adopt not only gen. quant. quant. but also inf. many only.

\[ \neg a \] \( \psi(a) \) means \( \psi \) holds for at least one \( a \).
Sud we could define which says I talks at least for 2 a.

But no-one has found how to define such a thing successfully. Hence we are just quiet only as obverse.

IV Rule Concerning Detachment.

Some as in Part of thete - it tells it just for δ.

Let us prove it for δ.

We state the rule here

\[ \Gamma, \phi \vdash \beta \]

\[ \Gamma \vdash \phi \]

This rule does not hold under quant.

As a meddle we have p. We must just shift all variables in MGO

\[ \Gamma, \phi \vdash \beta \]

\[ \Gamma \vdash \phi \]

\[ \Gamma \vdash \beta \]
The rule under question is

\[ \mathbf{X} = \mathbf{X}_1 \mathbf{X}_2 \mathbf{X}_3 \]

\[ \mathbf{X}_1 \mathbf{X}_2 \mathbf{X}_3 \]

\[ \mathbf{X}_1 \mathbf{X}_2 \mathbf{X}_3 \mathbf{X}_4 \mathbf{X}_5 \mathbf{X}_6 \mathbf{X}_7 \mathbf{X}_8 \]

Remember, no vacuous quant.

The rule of first is rule of dict of first is

Afterly powerful.

I

This causes difficulty where you have variables of different types or same sorts.

Rule of Substitution in PC is very simple. If \( p \) is a variable in a wtt \( q \) of PC then for \( p \) we can sub any constant, or proof (when it is built of things already in the system).

Formulation of this rule causes me diff.
If we have variable function we have trouble.

\( f(p) \)

function is variable.

or \( y(x) \) from EC.

We want to transform \( y(x) \) into \( x = y \).

EC does this in the following way:

Start \( = y(x) \) to sub no or to get \( x = y \).

They say "\( = y \)" is an incomplete symbol.

(And thus since such an expression is neither a formula nor belonging to no sense, it really has no sense).

To get \( y = x \) we need to sub "\( y = \)" for \( y \).

This is also an incomplete symbol.

\[ x = y \] or \( y \) = \( y \) are different incomplete symbols.
In some systems the formulation of this rule is extremely complicated.

In Proof Ontology the key point is that you may sub for variables occurring in M.G.0 only affixions belonging to the same sem set as the variable.

We do not have incomplete symbols (factually) (sometimes we use them in informal proofs)

\[ \frac{\phi \pi \xi}{\psi (\phi (\pi \xi))} \]

Thesis a post of our thesis proved already

We wish to get \[ \psi (x = y) \].
Any connected symbol may be used as a variable up to the moment it is defined as a constant.

We need here an auxiliary definition:

Let 

\[
\mathcal{X}_1(x, y) = \frac{\partial}{\partial x} f(x, y) + \{x\}
\]

This means a constant

we shall never use it again

This is a very weak def with in the first line the argument (x)

\[
\frac{\partial}{\partial x} f(x, y) + \{x\}
\]

belongs to the same sem set as f

So we may sub

\[
f / \frac{\partial}{\partial x} f(x, y)
\]

By sub we can get

\[
\mathcal{X}_1(x, y) = \frac{\partial}{\partial x} (f(x, y) + \{x\})
\]

This expression is either free

(i.e. not under some quantified

function).

Then we can use our def of \( \mathcal{X}_1 \)

\[
\mathcal{X}_1(x, y) = \frac{\partial}{\partial x} (x = y)
\]
It is on argument of some quantifier
Then we must use the next two rules (extensionality)
One more thing on side. If we have say
$[x]. \phi(x, y, \psi(xy))$,
or $[y] \phi(x, y, \psi(xy))$,
It our free variable in $\phi$ is also under an interior quantifier.
Then we cannot for $x$ substitute a variable $y$ or a formula wherein a
variable equates to $y$
If we do we get
$[y]. \phi([y], \psi(y))$
Then we have a great confusion
If you can make a $\ast$ at once.
This Burali-Forti should never be made. It is
irresponsible as our alphabet is unlimited.
This is a rule in any system which possesses internal growth. The exact formulation of this rule is not easy and it is a long question, but then remember a few days of practice make thing clear.

Now take FCI (even not restricted)

Here we have no rule of intentionality or a limited rule (say for individuals).

To build a full FC of any order, then for any type you must accept as axiomatic a suitable rule of eft.

If you have accepted in our system a new ren cat then you can accept a therin which guarantees expontiability in all expressions belonging to this ren cat.
Ontology is a much richer system of types than P.L. We have not only types which contain propositional functions. But we also have some form functions. (Just as we have 2 kinds of sap).

We would like to have a proof for all such cases. So we must devise the rule in two parts. Extensionality for Ontological forms of protothetic forms.

In Proto, if we have

\[ p \equiv q \]  
\[ \varphi(\alpha) \]
\[ \frac{2 \equiv \beta}{\varphi(\beta)} \]

we must accept the Axiom

\[ p \equiv q \implies [f] : f(p) \equiv f(q) \]
A pecuilar property of protolabia is that
this theorem is equiv (over the field of PC)

to

\[ f(0) = 1, f(1) \neq 1, f(p) \]

ie. monolongy.

Such a formula gives 2 kinds of

possibilities depending on what we propose

6. props.

To construct such a theorem we must
introduce two new sets. We can do this
by introducing a set of 6

say, defn \( \exists p \equiv p \equiv \exists \alpha \cdot a \cdot \)

prop form fact for 1 prop any

So we have this new set in the system.
Two more rules:  

- Extensivity
- Two are necessary since we have Protololus  

\[ p \equiv q \text{ proto} \]  
\[ a = b \text{ out equality} \]

How do we define equivalence for such things?

Easy:  
\[ y \equiv p \]
\[ \text{here is analog out} \]
\[ \equiv \text{ in } p \equiv q, \text{ but a different symbol.} \]

\[ [p]: \ q(p) \equiv \psi(p) \]

some function \( q \) is equal to function \( \psi \), where

can equis is of the higher degree.

So  
\[ q(p) \equiv \psi(p) \]
\[ \equiv \]
\[ y \equiv \psi \]
\[
\Phi(p_1, \ldots, p_m) \equiv \Phi(p_1, \ldots, p_m)
\]

Equivalence of a higher degree

The same can be done with names to use \( a \odot b \) instead of the customary \( a \equiv b \).

\[ a \odot b \equiv [A]: \ A \odot a \equiv A \odot b \]

Suppose we would like to define \( \Phi \odot \Phi \)

when \( \Phi \odot \Phi \) are prop form but for some arg.

We can define this as:

\[ [A]: \ y \odot a \equiv y \odot a : \equiv \Phi \odot \Phi \]

\( \Phi \odot \Phi \) in a higher remantial level

Concerning rule of exit in proto function in

Inflation.

This rule says that under certain
Later, explained conditions you can add to the system to form a term of the following form. (Please remember that this is not an exact formulation but that we can use many such functions.)

\[ [Y]: [a, \ldots, a_n]: Y(a, \ldots, a_n) \equiv Y(a, \ldots, a_n) \]

\[ \equiv: [Y]: \phi[Y]: \equiv: \phi[Y] \]

Any Belong to and can exist already in the left.

This can be a many links function.

This rule allows us to deal in an extensional way with any thing in the system.

Anything you can say about \( Y \) you can say about \( Y \) if you can say about \( Y \) if \( Y \) is \( \ldots \).

- bar\( \!\!\!\!\!\ldots \) since we can always prove this.

When can you add such a term to the system?
Any variable belonging to a term must belong to a term not already introduced in the righth. So any thing in the formula must have a sense. If such a thing is not in the righth we must add the appropriate def before we use this rule, as the full def witness.

\[ L_1 : q(a^r - a^r) = q(6a^r - a^r) = \frac{q}{a^r} \]

Rule VII says the same thing for the same case of memr.

\[ L_7 : [a q, - a^r]. A \in q(\bar{q}, - a^r) = \Xi. \]

\[ A \in q(\bar{q}, - a^r) = \Xi. [x]: x \in q(\bar{q}, - a^r). \Xi. \]

\[ q - a^r \text{ can be no args. In this case} \]

\[ y + y \text{ are reduced to names.} \]
The same conditions as before must hold.

All variables in $\mathcal{V}$ must be careful to see

Our group, i.e., belongs to an already existing system.

Once an $\mathcal{A}$ is introduced in the set

it behaves as any other formula. It has no special rules governing its use.

One thing is essential: whether the

three added by Rule VI are mutually

independent

We do know one very peculiar thing. In

the system we have to distinguish identity

from equality. When we name a complex $b$

$(a \otimes b)$. We can distinguish identity for

individuals $A = B$ means $A \otimes b$ is the

same individual.
For identity for individuals we can prove


We have remarked nature of a name. Any

long form that we distinguish individual names

A & B implies A is an individual.

If we suppose the A is a really existing object.

But this is not the business of logic. Let

Metaphysics do it.

If an individual says he is the only existing

object, our reply is still ok for him.

In EC we prove: $[7x7, 4/1x3]$.

It means in EC not only that $93x3$ is true

for a certain given $x$, but it means also

that $x$ really exists in the world. From

the truth of the formula you can prove that at least

one individual in the world, in PM 22

they prove this.
Philosophers interested in logic have difficulty here. They say (Quine) they cannot exist a of Pegum. Ont. I do not give existence, all it says in Ont is that there is a name $\exists! x, (\text{true formula})$ and even the empty name. In our logic we have to prove $x \in A$.

In ont you cannot prove

$[FA], A \vDash A.$

This can however be added as an axiom.

Therefore $[\exists x] \vdash x \in A \text{ is in FC or set theory.}$

Not in Ont

The difficulty is in understanding

Quine. They have no potential motion on the
Grant 3. Our particular guess is no existential import. We see it in the sense in which or in just in sense.

You can prove easily the consistency
of Ontology even if you add axioms saying
that there are an arbitrary finite number of
objects really existing. For an infinity of
object we have no proof of consistency — but
neither does any other system with an
axiom of infinity.

The proof of the consistency of ontology is

Done by interpretation in proto-theta.

Let names be considered as props & let
& be considered as conjunction. Then all our
axioms & rules become true formulas in proto.
AC does not follow from our work. But
it can be added as a rule since it is extensionally
ie we need it for every sem set.

But if we have AC for the case cost \( m+1 \)
we can prove it for \( m(-1) \).

Next week we begin formal deductions.
Preliminary Propositions:

B. \((A_a): A \in a = [\exists B], B \in A = [A_B]\).

1st Axiom of Ontology: \(B \in A \cdot C \in A \cdot D \in B \cdot C.

Nothing else than a.

Crossed off the condition for \(\in C\) referred using \(A\).

In the original symbolism, which is interpreted for some reason, we write \(E \in A a\).

Here we have adopted not only the relation, but also two prior assumptions.

From rules concerning def the parenthesis \(a\).

A original format in the system of functions where any one names (one or more variables).

Prescribe certain letters to this so that sean.

Cat, \(x, y, z\) etc. used as variable for woman.

This is rather restricting in use.
If we have a limited number of symbols for variables, this is inconvenient if we have a limited number of variables, e.g., in $PC_3$, only 3 are variables.

In our system, we have an unlimited number of types, so this is difficult to formulate the rules of procedures by the use of specific letters.

The special kind of parentheses is much more convenient.

This is a single axiom of Ontology.

Analyze it from the former point of view.

What is the structure of this formula, it is

$p = q \cdot r \cdot s$

So it consists of $p \Rightarrow q$, $p \Rightarrow r$, $p \Rightarrow s$.
B1. \([\text{Aa}] : \text{AeA} \to \text{EaB} \). \text{BeA}

There is no difference between capital and small letter.

But it is a practical custom to use caps for initial

B2. \([\text{ABCe}] : \text{AeA} \to \text{BeA} \to \text{CcA} \to \text{BcC} \)

B3. \([\text{AbA}] : \text{AeA} \to \text{BeA} \to \text{BeA} \to \text{BeA}\)

B4. \([\text{AbA}] : \text{BeA} \to [\text{Bc}] : \text{BeA} \to \text{CeA} \to \text{BcC} \)

\([\text{B}] : \text{BeA} \to \text{BeA} \to \text{BeA} \)

B2 gives consequences of individuals.

B3 is just \([\text{AbA}] : \text{BeA} \\to \text{AeA} \to \text{BeA}\)

from the suggestion given by Peano & adopted by Russell

logicians are accustomed to having memberships

Non transitive.

\(x \in d \subseteq \beta. \to x \in \beta\)

By theory of types, this has no sense. It

is not a well constructed formula.
In their quest you have no inconsistency
for membership. They say instead:

\[ x \in y \iff y \subseteq x \]

Peons gone the forlorn.

If Peter is an Apostle,

Apost belongs to class of 12

\[ \therefore \text{If P is 12.} \]

This cannot be applied in our next series
Apost is a common name & we cannot
write the second hyp.

We have given two moments the same ending

Mep Bonapart is Emperor

\[ \text{Victor at M is N B} \]

\[ \therefore \text{Victor of Mepisog is Emperor.} \]
The future analysis when this no was established has shown that $B_1 - B_4$

are not mutually independent. Namely in 1923, Dr. Tarski proved that $B_2$ follows from $B_3$.

So Skigin observed a new axiom $B_2$ [A]: $B e a.$ $\equiv [\neg B]. B e A. B e a.$

$[B C]. B e A. C e A. \neg . B e C$

$\{B I\} \Rightarrow \{B II\}$

These proofs can be given in elementary ontology, i.e., ontology in which no extensionalism is used. This proof is rather easy.

In 1929, Sobociński proved that from $B_3$ $B_4$ follows. But $S$'s proof is rather complicated and requires the use of extensional reasoning.
These deduction forms show how an axiom can be derived from the book, pp. 3-6. The format is slightly ambiguous, but insignificantly so (added Aug 2, 2018).

When Bo presented this result to Bernicek, he remarked at once that $B_1$ and $B_3$ can be connected in a single formula.

\[ A_1. \quad [A_0]: \quad A \& A. \equiv [\exists B].\quad A \& B.\quad B \& A. \]

Extensionality is necessary to prove $A_1 \equiv B_1$. These results were presented in 1931 in Polish.

They have been translated into English. Polish logic by McCaffrey et al., 1965?

Two of 5 papers have been translated here.

We adopt $B_1$ as a single axiom of ontology. We can define terms isomorphic to any mathematical term. AC

$\forall x \Phi$ can be added.
A2. [Aa]: A e a \cdot 2 \cdot [B]. A e B. B e a \quad [A1]

A3. [A0a]: A e B. B e a \cdot 2. A e a \quad [A1]

This is just B3.

A1. [A0a]: A e a. B e A \equiv A e \times (B a)

This is an ontological def.

It is a correct def. Free variable on right
occurs once & on free on left. Definiens is a
and one member of which is unique prop?

Only in Definiens is a subord in definiens.

This defines a certain name function

'x' is a const which is of set out of
some form factor for two some args,
We introduce a new kind of parenth.
( ) must now always be used for some
forming function with some args.
9th Class.

91. \[ {\text{A} \in \text{A}}, \text{B} \in \text{A} \Rightarrow \text{A} \times \{ \text{B} \} \in \text{A} \]

Example: \[ \varepsilon \in \{ \text{A} \times \{ \text{B} \} \} \]

The meaning \( \varepsilon \) is not reducing to \( \text{B} \).

As it is an aux def.

91. \[ \varepsilon \in \{ \text{A} \times \{ \text{B} \} \} \]

94. \[ \{ \text{A} \times \{ \text{B} \} \} \in \text{A} \}

Dem. 

\[ \{ \text{A} \times \{ \text{B} \} \} \]

1) \( \text{A} \in \text{A} \).

2) \( \text{B} \in \text{A} \).

3) \( \text{C} \in \text{A} \).

4) \( \text{A} \times \{ \text{C} \} \). \[ \{ \text{A} \times \{ \text{C} \} \} \]

5) \( \text{B} \times \{ \text{C} \} \). \[ \{ \text{B} \times \{ \text{C} \} \} \]

Tarski's proof that from A3 follows A4
This is an example of a creative def w/o this def you cannot prove this. A4.

This proof is elementary as extentionality is not needed.

A3. [Aa]: \( \text{A} \in \text{a} \Rightarrow \text{A} \in \text{A} \)

An individual is itself.

\[ \text{[A]}: \text{A} \in \text{A} \quad \text{This is not true in our system} \]

So to prove this we must know \( \text{A} \) is an individual.

Dem [Aa]:

1. \( \text{A} \in \text{a}, \text{c} \). \[ \text{[A3:\text{B}]} \]

2. \( \text{A} \in \text{B}. \) \[ \text{[A2; 1]} \]

3. \( \text{B} \in \text{a}. \)

\[ \text{A} \in \text{A}. \quad \text{[A4, A/\text{B}, B/\text{A}, c/\text{A}; 3;2]} \]

The law of identity for individuals cannot be formulated w/o the hyp \( \text{A} \in \text{a}. \)
A6. \([\text{Aba]}\): \(A \& a, B \& A \Rightarrow A \& B\)

even, but very interesting (as to) you will
not find it in any other system.

Characteristic Formula of Ontology

When induc stuff was discovered it officially used
there is no trace that anyone formulated such a
thesis before this system.

St. Thomas in Summa Theologica gives the
uniqueness (one) of God. His reasoning
is intuitively just the above thesis.

Dem.: \([\text{Aba]}\):

1. \(A \& a\).

2. \(B \& A \Rightarrow A\).

3. \(A \& A \Rightarrow [A5.1]\)

\(A \& B\). \([A4.3A, C\mathcal{B}; \]
\[1,3,2\]
A1. \([A] \subseteq A \Rightarrow A \subseteq [a] \subseteq A \subseteq a\] 

Suppose now we can prove several otherelemThms:

Now we shall prove B4.

D2. \([a] \subseteq [A] \subseteq A \subseteq a\]

This defn in section here only to get a sem cat.

It is not empty - this defn however important in its own right.

D3. \([\lambda a]. A \subseteq a \Rightarrow \lambda a \in [A]a\]

Many-likes defn in which \(\lambda a\) belongs to sem cat or \(\lambda\). But \(\lambda a\) here is not the \(\epsilon\) of \(\lambda a\). Thus \(\lambda a\) belongs to sem cat of jenclor form jenclor w/\(\lambda a\) sem cat which forms a prop form fruit for income app.
No misunderstanding of the parentheses.

Distinct \( E \setminus \{ a \} \neq E + a \setminus \{ a \} \).

We can obviously define

\[
[O_3'] [A_\alpha]: \, A \in \alpha \equiv ( E + A + \{ \alpha \} )
\]

\( E \) cannot be put here as it is already used here in the same cat.

\[ E_1 \quad [ab] , [A]: \, A \in \alpha \equiv A \in b: \equiv [\gamma]: \]

\[ \gamma \{a\} \equiv \gamma \{b\} \]

This follows directly from the rule just as \( \gamma \) does. But you must check if it is possible at this time to add this thesis.

We have the 2nd rule of \( E_1 \). The form is OK.

\( \gamma \) is a variable function for one non-zero arg. Some sem cat ok! So \( E_1 \) is OK.

This is an extremely strong formula.
3. BBA : Cea : D. BCA
4. BBA : Cea : D. Cea

Just by

1. \[ B : A \]
2. \[ BC : B : A \]
3. \[ B : A \]
4. \[ C : Cea : D. Cea \]

[2, B1c, c/\[ B : 1\]

B1c means that we interchange B \& C

5. \[ C : C : B \]
6. \[ C : B \]
7. \[ A \]
8. \[ B : A \]
9. \[ C : A + \]

\[ D_3, A / B : 8 \]
Sobociński's proof is done.

This is impossible to prove from $\{A_3 \cup A_7\}$.

\[ A \subseteq A \cup \{ \beta \} \cup \{B \} \cup \{C \} \cup \{D \} \cup \{E\} \]

This proves the 1st Axiom of ontology.

This proof was given when S was a student of the second year and immediately published.