From the Continuity Problem of Set Potential to Georg Cantor Conjecture

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Abstract: Background in 1878, Cantor puted forward his famous conjecture. Cantor's famous conjecture is whether there is continuity between the potential of the set of natural numbers and the potential of the set of real numbers. In 1900, Hilbert puted forward the first question of 23 famous mathematical problems at the International Congress of mathematicians in Paris. Purpose To study the continuity of set potential between the natural number set and the real number set, so as to provide mathematical support for the study of male gene fragment in human genome. Method The potential is extended by infinite division of sets and differential incremental equilibrium theory. There is a symmetry relation that the smallest element of infinite partition is 2. When a set A corresponds to a subset of a set B one by one, but it can't make A correspond to B one by one, the potential of A is said to be smaller than that of B. If a is the potential of A, and b is the potential of B, then a<b. We use ~ 0 to express the potential of the smallest natural number set and ~ 1 to express the potential of the smallest real number set. At present, it is not known whether there is a set X, the potential of X satisfies ~ 0 < x < ~ 1. Results There is no continuity problem in the set potential of the natural number set and the real number set, and four mixed potentials can be formed. It belongs to the category of super finite theory. Conclusion Cantor's conjecture is proved that potential of the natural number set and the real number set. That is, the potential of X satisfies ~ 0 < x < ~ 1 does not exist.

Keywords: Natural Number Set, Real Number Set, Set Potential, Continuity Problem, Mixed Potential, Hyperfinite Theory, Infinite Classification

1. Introduction

1.1. Cantor's Famous Conjecture Is Whether There Is Continuity Between the Potential of Natural Number Set and That of Real Number Set

Further proof on the continuity of set potential. When a set A corresponds to a subset of a set B one by one, but it can't make A correspond to B one by one, the potential of A is said to be smaller than that of B. If a is the potential of A, and b is the potential of B, then a< b. We use ~ 0 to express the potential of the natural number set and ~ 1 to express the potential of the real number set. At present, it is not known whether there is a set X, the potential of X satisfies ~ 0 < x < ~ 1. Cantor put forward his famous conjecture that the above X set does not exist.

In order to study continuity of set potential between the natural number set and the real number set, four mixed potential are formed, which belong to the category of transfinite theory and are discontinuous set potential. The connection in the complexity of human genes is formed by the continuity of set potential. It is found that the complex pairing of genomes also has weak order and law, the continuity and controllability of the whole pairing potential of gene chain, and the discontinuity of DNA gene fragment, and the continuity of DNA forming chromosome skeleton to life body, so as to ensure the relative stability of species.

1.2. The continuity Problem of Proving Set Potential in Detail

Sets $A^i \subseteq A, B^i \subseteq B$, potential $a^i \leftrightarrow b^i \subseteq A$, and $a^i \leftrightarrow b^i \subseteq B$

$\forall a^i \leftrightarrow b^i \subseteq A$, $\forall a^i \leftrightarrow b^i \notin B$

Let $a^i < a^i 0, b^i < a^i 1$

If $\forall a^i \leftrightarrow b^i \subseteq A$
The potential of the set of $X$ is $X_i$

$$X_i \subset 1, 0 < x < 1; 1X_i \subset 0, \exists 0 < x < 1$$

All $X$ sets satisfy $0 < x < 1$. It is not stable, so there is no relation between the potential of natural number set $N$ and real number set $R$ that is $0 < x < 1$.

See axis below

![Coordinate axes of natural number set and real number set](image)

**Figure 1. Coordinate axes of natural number set and real number set [set potential].**

Subsets of set N of natural numbers $a = \{0,1,2,3,4,5\}, a \subset N$
Subsets of real set R set $b = \{0,1,5,2,3,4,4,1,5\}, b \subset R$
Sets $c = \{0,1,2,3,4,5\}, c \subset N \subset R$

For all known as, $A$ is the potential of $N$ set, $B$ is the potential of $R$ set, $C$ is the potential of $N$ set.

$\forall a, c$, potential $a < b \subset a < x^i < b$
$\forall a, c$, One to one corresponding subset, and $a, c$ are natural numbers.

Potential $a < b \subset a < x^i < b$, $0 < x < 1$

$$0 < x < 1$$

From the above not strict derivation, it may be considered that $\sim 0 < x < 1$ does not exist

A strict, systematic and structured deep mathematical proof of $0 < x < 1$

From $a = \{0,1,2,3,4,5\}, b = \{0,1,5,2,3,4,4,1,5\}$, there is

$$a = \{0,1,2, ..., n\}, b = \{0,1,2, ..., R\}$$

Potential $\forall \bigcup_{i=1}^{n} a^0$, $i = 1,2, ..., m, m+1, ..., n$; potential $\forall \bigcup_{j=1}^{p} b^0$, $j = 1,2, ..., p, p+1, ..., n$

Subset $\forall \bigcup_{i=1}^{n} \Delta a^0 = \forall (U) \left[ \int a^0 b^0 + \Delta a^0 \right], \Delta a^0 < \int a b^0, \text{Analysis from set unit}$

$$\forall \bigcup_{i=1}^{n} \Delta a^0 = \{ \Delta a_1^0, \Delta a_2^0, ..., \Delta a_k^0, ..., \Delta a^0 \}, \forall (U) \left[ \int a^0 + \Delta a^0 \right] = \left[ \int a \Delta a^0 \right]$$

$$= \left[ \int a b^0 + \Delta a^0 \right] = \left[ \int a b^0 \Delta a^0 \right]$$

(1)

Further structure

$$\forall (U) \Delta a^0 \approx \forall (U) \left[ a^0 + \Delta b^0 \right]$$

(2)

From formula (2), we can see that there is no comparability of set $X$, so

Let $\forall (U) \Delta a^0 \rightarrow a^*, \forall (U) \left[ \Delta a^0 - \lim a^0 b^0 \right] \rightarrow b^*$

Let $a^* \rightarrow 0, b^* \rightarrow 1$ again, and suppose that there is an $X$ set, then there is $0 \approx x \approx 1$

Therefore, $0 < x < 1$

$$\forall (U) \Delta a^0 \approx \forall (U) \left[ \Delta a^0 - \lim a^0 b^0 \right]$$

(3)

Further analyze (2) and sort out the formula.
\[ \forall(U)\Delta a^0\rightarrow, \forall(U) \left[ \Delta a^0 + \int \Delta x b^0 \right] \]

\[ \forall(U)\Delta a^0\rightarrow \approx \forall(U) \left[ \Delta a^0 + \lim \int \Delta x b^0 \right] \]

\[ \forall(U)\Delta a^0\rightarrow \approx \forall(U) \left[ \Delta a^0 + \lim \int \Delta x b^0 \right] \]

\[ \forall(U)\Delta a^0\rightarrow a^* \rightarrow \sim 0, \forall(U) \left[ \Delta a^0 + \lim \int \Delta x b^0 \right] \rightarrow b^* \rightarrow \sim 1 \]

\[ \forall(U)\Delta a^0\rightarrow \subset \forall(U) \left[ \Delta a^0 + \lim \int \Delta x b^0 \right] \]

For (2) and (8), take a set X

\[ \forall(U) \left[ \Delta a^0 + \lim \int \Delta x b^0 \right] \rightarrow \forall(U)\Delta a^0\rightarrow \]

\[ \forall(U)\Delta a^0\rightarrow = \forall(U)\Delta a^0\rightarrow + \forall(U)\Delta a^0\rightarrow + \cdots + \forall(U)\Delta a^0\rightarrow \]

(10) Where, \( \forall(U)\Delta a^0\rightarrow \) is the same as (2) or (5); the potential \( \forall(U)\Delta a^0\rightarrow \) at the left end is the same, so as to distinguish them (they belong to different set potentials),

So, change the \( \forall(U)\Delta a^0\rightarrow \) in formula (11) to \( \forall(U)\Delta a^0\rightarrow \)

\[ \forall(U)\Delta a^0\rightarrow = \forall(U)\Delta a^0\rightarrow + \forall(U)\Delta a^0\rightarrow + \cdots + \forall(U)\Delta a^0\rightarrow \]

The real number set R can be written as

\[ \forall(U) \left[ \Delta a^0 + \lim \int \Delta x b^0 \right] \]

from which it can be separated:

\[ \forall(U)\Delta a^0\rightarrow = \{ \forall(U)\Delta a^0\rightarrow + \forall(U)\Delta a^0\rightarrow + \cdots + \forall(U)\Delta a^0\rightarrow \}, \text{and} \forall(U)\Delta a^0\rightarrow = \forall(U)\Delta a^0\rightarrow \]

\( \Delta a^0\rightarrow \subset \mathbb{N}, \Delta a^0\rightarrow \subset R, R \text{ real number;} \)

\( \forall(U)\Delta a^0\rightarrow \subset \mathbb{N}, \mathbb{N} \text{ Natural number} \)

Because N is a natural number and has continuity, \( \forall(U)\Delta a^0\rightarrow \) is also continuous; however, \( \forall(U)\Delta a^0\rightarrow \) is continuous.

\[ \therefore \Delta a^0\rightarrow \subset \mathbb{N}, \Delta a^0\rightarrow \subset R \]

Subset of set of natural numbers, Subset a of potential \( \forall(U)\Delta a^0\rightarrow \), potential a. Subset of set of real numbers, Subsets b of potential \( \Delta a^0\rightarrow \), potential b.

Let \( a^* \rightarrow \sim 0, b^* \rightarrow \sim 1 \) The potential of a and b are respectively:

\[ a \subset \forall(U)\Delta a^0\rightarrow, a \subset \Delta a^0\rightarrow \]

\[ b \subset \forall(U)\Delta a^0\rightarrow, b \subset \Delta a^0\rightarrow \]

\[ \therefore \text{continuous or not} \]

Assume \( \forall x \subset X \), then \( \forall x \subset \forall(U)\Delta a^0\rightarrow, \forall x \subset \forall(U)\Delta a^0\rightarrow \)

\( \forall(U)\Delta a^0\rightarrow \sim \forall(U)\Delta a^0\rightarrow \text{equivalent or not, and} \)

\( \forall(U)\Delta a^0\rightarrow \subset \mathbb{N}, \forall(U)\Delta a^0\rightarrow \subset \mathbb{N} \)

Whether it is established, and Whether \( \sim 0 < x < \sim 1 \) is established.

For formula (7), detailed analysis

\[ \forall(U) \left[ \Delta a^0 + \lim \int \Delta x b^0 \right] \rightarrow \forall(U)\Delta a^0\rightarrow \]
\[ \forall (U) \Delta a_i^{0-} = \left\{ \forall (U) \Delta a_{i+1}^{0-} + \forall (U) \Delta a_{i+1}^{0-} + \cdots + \forall (U) \Delta a_{i+1}^{0-+\eta} \right\} \]  

Because the value of \( \varepsilon, \eta \) is continuous, that is, \( \varepsilon = 1,2,\ldots,n; \eta = 1,2,\ldots, m \)

\[ \forall (U) \Delta a_i^{0-} = \forall (U) \left[ \Delta a_j^{0-} + \lim \int_0^\Delta \sigma b_j^{0-} \right], \text{andi},i,\varepsilon = 1,2,\ldots \]

\[ \forall (U) \left[ \Delta a_j^{0-} + \lim \int_0^\Delta \sigma b_j^{0-} \right] \]

\[ = \left\{ \forall (U) \Delta a_{i+1}^{0-} + \lim \int_0^\Delta \sigma b_{i+1}^{0-} + \forall (U) \Delta a_{i+1}^{0-} + \cdots + \forall (U) \Delta a_{i+1}^{0-+\eta} \right\} \]  

\[ \lim \int_0^\Delta \sigma b_{i+1}^{0-} \approx \lim \int_0^\Delta \sigma b_{i+1}^{0-} + \lim \int_0^\Delta \sigma b_{i+1}^{0-+\eta} + \cdots + \lim \int_0^\Delta \sigma b_{i+1}^{0-+\eta} \]

\[ \forall (U) \Delta a_{i-1}^{0-} \approx \left\{ \forall (U) \Delta a_{i-1}^{0-} + \forall (U) \Delta a_{i-1}^{0-} + \cdots + \forall (U) \Delta a_{i-1}^{0-+\eta} \right\} \]

\[ \forall (U) \Delta a_i^{0-} \approx \left\{ \forall (U) \Delta a_i^{0-} + \forall (U) \Delta a_i^{0-} + \cdots + \forall (U) \Delta a_i^{0-} \right\} \]  

So, Subset of set of natural numbers, potential \( \forall (U) \Delta a_i^{0-} \), and subset of set of real numbers, potential

\[ \forall (U) \left[ \Delta a_{i-1}^{0-} + \lim \int_0^\Delta \sigma b_{i+1}^{0-} \right] \approx \forall (U) \Delta^* a_i^{0-}, \therefore \forall (U) \Delta a_i^{0-} \approx \forall (U) \Delta^* a_i^{0-} \]  

If \( \forall (U) \Delta a_i^{0-} \equiv \forall (U) \Delta^* a_i^{0-} \), then \( \sim 0 < x < \sim 1 \) established.

If \( \forall (U) \Delta a_i^{0-} \approx \forall (U) \Delta^* a_i^{0-} \), then \( \sim 0 < x < \sim 1 \) not established.

\[ \forall (U) \left[ \Delta a_{i-1}^{0-} + \lim \int_0^\Delta \sigma b_{i+1}^{0-} \right] \]  

is a discontinuous potential, and \( \forall (U) \Delta^* a_i^{0-} \) is a discontinuous potential, that is the potential of \( R \) (set of real numbers).

\( \forall (U) \Delta a_i^{0-} \) is a continuous potential, that is, the potential of \( N \) (set of natural numbers).

\[ \therefore \forall (U) \Delta a_i^{0-} \text{ and } \forall (U) \Delta^* a_i^{0-} \text{ are the potentials of the minimum set. } \forall x \in \forall (U) \Delta a_i^{0-}, \forall x \in \forall (U) \Delta^* a_i^{0-} \]

\[ \therefore \forall (U) \Delta a_i^{0-} \approx \forall (U) \Delta^* a_i^{0-} \text{ changed to } \forall_0 \sigma (U) \Delta a_i^{0-} \approx \forall_0 \sigma (U) \Delta^* a_i^{0-} \]

\[ \therefore \sim 0 < x < \sim 1 \text{ not established.} \]

\[ \forall (U) \left[ \Delta a_{i-1}^{0-} + \lim \int_0^\Delta \sigma b_{i+1}^{0-} \right] \approx \forall (U) \Delta^* a_i^{0-}, \forall_0 \sigma (U) \Delta a_i^{0-} \approx \forall_0 \sigma (U) \Delta^* a_i^{0-} \]

\[ \therefore \sim 0 < x < \sim 1 \text{ not established.} \]  

Explain: \( \lim \int_0^\Delta \sigma b_{i+1}^{0-} \text{ in } \forall (U) \left[ \Delta a_{i-1}^{0-} + \lim \int_0^\Delta \sigma b_{i+1}^{0-} \right] \) is always with \( \forall (U) \Delta a_{i-1}^{0-} \)

About \( \forall (U) \left[ \Delta a_{i-1}^{0-} + \lim \int_0^\Delta \sigma b_{i+1}^{0-} \right] \)

\[ \forall (U) \Delta a_{i-1}^{0-} \approx \forall (U) \Delta a_{i-1}^{0-} + \forall (U) \Delta a_{i-1}^{0-} + \cdots + \forall (U) \Delta a_{i-1}^{0-+\eta} \]

\[ \lim \int_0^\Delta \sigma b_{i+1}^{0-} = \lim \int_0^\Delta \sigma b_{i+1}^{0-} + \lim \int_0^\Delta \sigma b_{i+1}^{0-+\eta} + \cdots + \lim \int_0^\Delta \sigma b_{i+1}^{0-+\eta} \]  

For (20), take the limit

\[ \lim \left[ \forall (U) \Delta a_{i-1}^{0-} \right] \approx \lim \left[ \forall (U) \Delta a_{i-1}^{0-} + \forall (U) \Delta a_{i-1}^{0-} + \cdots + \forall (U) \Delta a_{i-1}^{0-+\eta} \right] \]
Discuss the relationship between \( \forall(U)\Delta a_i^{0^*} \) and \( \forall(U)\Delta^* a_i^{0^*} \)

\[
\forall(U) \left[ \Delta^* a_i^{0^*} + \lim \frac{\varphi b_{\delta_j}^{0^*}}{\varphi_j + \varepsilon} \right] \leftrightarrow \forall(U)\Delta a_i^{0^*}; \because \lim \frac{\varphi b_{\delta_j}^{0^*}}{\varphi_j + \varepsilon} \text{ is not potential offset of natural numbers.}
\]

\[
\lim \frac{\varphi b_{\delta_j}^{0^*}}{\varphi_j + \varepsilon} \text{ in } \forall(U) \left[ \Delta^* a_i^{0^*} + \lim \frac{\varphi b_{\delta_j}^{0^*}}{\varphi_j + \varepsilon} \right] \text{ is always with } \Delta^* a_i^{0^*} \]

\[
\forall(U)\Delta a_i^{0^*} \neq \forall(U) \left( \Delta^* a_i^{0^*} + \lim \frac{\varphi b_{\delta_j}^{0^*}}{\varphi_j + \varepsilon} \right), \text{ and in infinitesimal, infinitesimal set potential, it is always accompanied by } \lim \frac{\varphi b_{\delta_j}^{0^*}}{\varphi_j + \varepsilon} \tag{23}\]

\( \therefore 0 < x < 1 \) not established.

That is, the potential element of the set of 2, \( \sim 0 \in N \) natural numbers set in \( \sim 0 \); and the unit of the potential of 2, \( \sim 1 \in R \) real number set in \( \sim 1 \).

\( \sim 0 = 2 \neq \sim 1 = 2 \), that is \( 2 \neq 2^* \). It shows that the set potential has a great influence on the meaning of numbers.

2. This Paper Discusses the Further Understanding of \( \forall(U)\Delta a_i^{0^*} \) and \( \forall(U)\Delta^* a_i^{0^*} \) to the from the Meaning of Infinite Classification of Sets

2.1. The Meaning of Infinite Classification, the Smallest Element is 2, i.e. \( 2 \{1 \rightarrow 1\} \), One-to-One Correspondence

\[
\forall \{1 \rightarrow 1\} \in 2\{1 \rightarrow 1\}; \forall(1), \forall_{,1}(1) \in 2\{1 \rightarrow 1\}
\]

\[
\left\{ \begin{array}{l}
\forall(1), \forall(U)\Delta a_i^{0^*} \vdash \forall(1), \forall_{,1}(1) \in 2\{1 \rightarrow 1\} \\
\forall_{,1}(1), \forall(U)\Delta^* a_i^{0^*} \vdash 2\{\forall(1), \forall_{,1}(1)\} = 2\{1 \rightarrow 1\}
\end{array} \right.
\]

From \( 2\{\forall(1), \forall_{,1}(1)\} = 2\{1 \rightarrow 1\} \), it can be deduced.

\[
2\{\forall(U)\Delta a_i^{0^*}, \forall(U)\Delta^* a_i^{0^*}\} = 2\{\forall(U)\Delta a_i^{0^*} \rightarrow \forall(U)\Delta^* a_i^{0^*}\} \tag{24}\]

Further analysis of \( \sim 0 \) and \( \sim 1 \)

If there is \( \sim 0 \) potential a, \( \forall 2 \in a \); there is \( \sim 1 \) potential b, \( \forall_{,1} \in b \). We can find \( \forall 2 \rightarrow \forall_{,1} \), that is, \( 2 \neq 2^* \), which is changed as \( 2 \rightarrow 2^* \).

According to the property (24) formula, it can be deduced from the potential of natural number set and real number set.

\[
2\{\forall 2 \rightarrow \forall_{,1}\}, \text{ that is } 2\{2 \rightarrow 2^*\}; \forall 2 \in \sim 0, \forall_{,1} \in \sim 1 \tag{25}\]

According to (24) and (25), we can know whether there are two 2 in the potential of natural number set. Whether there are two \( 2^* \), in the potential of real number set. Their relationship: \( 2\{2 \rightarrow 2^*\} \). There are two 2 potentials in a natural set. They are different. They are called: 2'; 2''. There are two 2 potentials in the real number set. They are different. They are called: \( 2_0^*; 2_{0 *}^* \).

\[
\{[2,2^*] \rightarrow [2_0^*, 2_{0 *}^*] \}
\]

This from to general. Simplification of (24)

\[
[[\forall(U)\Delta^* a_i^{0^*}, \forall(U)\Delta^* a_i^{0^*}] \rightarrow [[\forall(U)\Delta^* a_i^{0^*}, \forall(U)\Delta^* a_i^{0^*}]] = [[\forall(U)\Delta^* a_i^{0^*}, \forall(U)\Delta^* a_i^{0^*}]] \rightarrow [[\forall(U)\Delta^* a_i^{0^*}, \forall(U)\Delta^* a_i^{0^*}]] \tag{26}\]

Passing to the limit in (26), we get

\[
\lim \left[ [\forall(U)\Delta^* a_i^{0^*} \rightarrow \forall(U)\Delta^* a_i^{0^*}], [\forall(U)\Delta^* a_i^{0^*} \rightarrow \forall(U)\Delta^* a_i^{0^*}] \right] = \forall(U)\Delta a_i^1 \land \forall(U)\Delta a_i^1 \tag{27}\]

Passing to the limit in the right-hand side of (27), we infer

\[
\lim [\forall(U)\Delta a_i^1 \land \forall(U)\Delta a_i^1] = \forall\Delta a_i^1 \land \forall\Delta a_i^1 \tag{28}\]

In (28), \( a_i^1 \) is the limit potential of mixing, \( a_i^1 \) is the limit potential of mixing. And simplify it.

\[
\forall\Delta a_i^1 \land \forall\Delta a_i^1 = \forall(\Delta a_i^1 \land a_i^1) \tag{29}\]

\( \therefore a_i^1, a_i^1 \) is the limit potential of mixing, \( \therefore a_i^1 \) is also the potential of mixing; i.e
\[ \lim \int_0^\Delta \varphi a_i^{1+\Delta x} \in \{N, R\}, \text{ and } N \text{ is the set of natural numbers, } R \text{ is the set of real numbers.} \]

\[ \therefore \lim \int_0^\Delta \varphi a_i^{1+\Delta x} \text{ is the infinitesimal infinitesimal; it is the category of the theory of hyperfinity.} \]

\[ a_i + \lim \int_0^\Delta \varphi a_i^{1+\Delta x} \] (30)

On the extension of the meaning of the potential of (30) infinite partition class, it embodies the symmetry relation that the smallest element after infinite partition is 2.

\[ a_i + \lim \int_0^\Delta \varphi a_i^{1+\Delta x} \quad \text{and} \quad a_i + \lim \int_0^\Delta \varphi a_i^{1+\Delta x} \] (31)

The meaning of this pattern is far-reaching.

\[ 2 \left\{ a_i + \lim \int_0^\Delta \varphi a_i^{1+\Delta x} \right\} \rightarrow a_i + \lim \int_0^\Delta \varphi a_i^{1+\Delta x} \] (32)

The meaning of relation (32) is the same as that of (21 → 1), and the elements with four potentials are simplified from (24) and (25), namely:

\[ 2(\mathcal{U} \Delta a_i^0, \mathcal{U} \Delta a_i^0) = 2(\mathcal{U} \Delta a_i^0, \mathcal{U} \Delta a_i^0) \] (33)

The above formulas and (32) are all elements of four potentials. So (32) the derivation is correct, take a pair of relations:

\[ a_i + \lim \int_0^\Delta \varphi a_i^{1+\Delta x} \rightarrow a_i + \lim \int_0^\Delta \varphi a_i^{1+\Delta x} \] (34)

From this, we can realize symmetry and order, and understand that disorder is also temporary.

2.2. It Embodies the Dynamic Law of Things and Four Mixed Potentials Belong to the Category of the Theory of Hyperfinity

(35) It can be seen that the minimum element after infinite classification is 2, and four mixed potentials are formed, which belongs to the category of the theory of hyperfinity. Because the minimum element of mixed potential is infinitesimal infinitesimal, there is

\[ a_i + \lim \int_0^\Delta \varphi a_i^{1+\Delta x} \text{ is always accompanied by } a_i \text{ potential. So } a_i + \lim \int_0^\Delta \varphi a_i^{1+\Delta x} \text{ is a discontinuous potential.} \]

\[ \therefore 0 < x < \sim 1 \text{ not established, Proof completed.} \]

3. Conclusion

3.1. There Is No Continuity Between Potential of the Natural Number Set and the Real Number Set

The smallest element after infinite partition is 2, which forms four mixed potentials. The smallest element is infinitesimal infinitesimal, which belongs to the category of transfinite theory. Georg Cantor's conjecture about the continuity of set potential is proved.

3.2. The Infinite Partition Class and the Continuity Problem of Set Potential Is Constructed by Differential Incremental Equilibrium Theory

Through the limit potential of differential increment, four mixed potentials with infinitesimal minimum element are formed. That is, \( a_i + \lim \int_0^\Delta \varphi a_i^{1+\Delta x} \) is always accompanied by \( a_i \) potential. So \( a_i + \lim \int_0^\Delta \varphi a_i^{1+\Delta x} \) is a discontinuous potential. Cantor's conjecture is proved that the potential of the set of natural numbers and the set of real numbers is discontinuous.

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