MATHEMATICS ENDS IN MEANINGLESSNESS

BY

COLIN LESLIE DEAN

B,SC, BA, B.LITT(HONS), MA, B.LITT(HONS), MA,

MA (PSYCHOANALYTIC STUDIES), MASTER OF PSYCHOANALYTIC STUDIES,

GRAD CERT (LITERARY STUDIES)

MATHEMATICS ENDS IN MEANINGLESSNESS

BY

COLIN LESLIE DEAN

B,SC, BA, B.LITT(HONS), MA, B.LITT(HONS), MA,

MA (PSYCHOANALYTIC STUDIES), MASTER OF PSYCHOANALYTIC STUDIES,

GRAD CERT (LITERARY STUDIES)

GAMAHUCHER PRESS, GEELONG WEST AUSTRALIA
2010

This paper is a case study in regard to the view that all views collapse into meaninglessness or absurdity or self contradiction. All products of human thinking end in meaninglessness or absurdity or self contradiction. Mathematic is no exception Mathematics has many paradoxes which show mathematics ends in meaninglessness On these paradoxes Bunch states

With the discovery of such mathematical paradoxes as the Burli-Forti paradox, Russell's paradox, Cantor's paradox and Skolem's paradox by early 1930's as Bunch notes, Hilbert's program did not succeed such that "disagreement about how to eliminate contradictions were replaced by discussions of how to live with contradictions in mathematics."[1] Attempts to avoid the paradoxes led to other paradoxical notions but most mathematicians rejected these notions.[2] Thus the present situation is that mathematics cannot be formulated, except in axiomatic theory, without contradictions without the loss of useful results. With regard to axiomatic theory, this cannot be proven to be consistent with the result that paradoxes can occur at any time. As Bunch states:

> "None of them [paradoxes] has been resolved by thinking the way mathematicians thought until the end of the nineteenth century. To get around them requires some reformulation of mathematics. Most reformulations except for axiomatic set theory, results in the loss of mathematical ideas and results that have proven to be extremely useful. Axiomatic set theory explicitly eliminates the known paradoxes [by creating an ad hoc axiom], but cannot be shown to be consistent. Therefore,

---

[1] B. Bunch, *Mathematical Fallacies and Paradoxes, Dover*, 1982, p.140.
[2] ibid., p.136.

other paradoxes can occur at any time [i.e. the Skolem paradox]."[3]

Axiomatic set theory avoids these paradoxes- not solves them - by constructing an ad hoc axiom called the axiom of separation which just outlaws/blocks/bans certain constructions- we will see this axiom of separation is impredicative and thus has to be dropped as many mathematicans and philosophers say such impredicative statements are illegitimate and must be banned from mathematics

This paper shows mathematics ends in meaninglessness for another five reasons

1) **Mathematics proves a finite number 1= an infinite number .999[bar]-to infinity note there are an infinite number of 9 to the right of the decimal**
ie a finite number = an infinite number- a contradictions in terms Thus mathematics ends in meaninglessness

2) **1+1=1**

3)MATHEMATICS JUST AD HOC ARBITRARILY DEFINES AWAY THE SELF-CONTRADICTIONS IN MATHEMATICS IE BY CREATING THE AXIOM OF SEPARATION –which is impredicative and thus invalid ALSO THIS AXIOM IS IMPREDICATIVE BUT IT OUTLAWS/BLOCKS/BANS IMPREDICATIVE STATEMENTS thus ZFC contradicts itself and 1)ZFC

[3] ibid., p.139.

is inconsistent 2) that the paradoxes it was meant to avoid are now still valid and thus mathematics is inconsistent

4)MATHEMATICS IS NOT THE LANGUAGE OF THE UNIVERSE as it is mathematics is just a bunch of meaningless symbols connected by rules

5 Mathematicians don't know what a number is

Mathematicians cannot define a number with out being impredicative-ie self referential thus mathematicians dont even know what a number is-thus maths is meaningless .All mathematics can say is a number is a number-which means they don't know what a number is

1)Australian's leading erotic poet colin leslie dean

see the free erotic poetry at gamahucher press
http://gamahucherpress.yellowgum.com/gamahucher_press_catalogue.htm

Dean points out mathematics proves 1=.9999[bar]-to infinity note there are an infinite number of 9 to the right of the decimal In other words it is proved a finite number 1 = an infinite number .99[bar] –which is a contradiction in terms

proof

x=.999[bar] the bar signals recurring numbers .note there are an infinite number of 9 to the right of the decimal

10x=9.99[bar]

10x -(x)= 9.99[bar] - (.999[bar])

9x=9

x=1

thus x=1 and x=.999[bar] note there are an infinite number of 9 to the right of the decimal

Ie 1 = .99[bar] note there are an infinite number of 9 to the right of the decimal

In other words it is proved a finite number 1 = an infinite number .99[bar] note there are an infinite number of 9 to the right of the decimal –which is a contradiction in terms thus mathematics ends in contradiction ie ends in meaninglessness

A finite number ie 1 cannot = an infinite number ie .99[bar] note there are an infinite number of 9 to the right of the decimal

so when maths says it proves

1=.999[bar] note there are an infinite number of 9 to the right of the decimal it is in a contradiction in terms and thus ends in meaninglessness

There is no way a finite number ie 1 can be the same as an infinite number ie .99[bar] they are a contradiction in terms You are miss useing language It is simple logic
if you say a finite number is the same as an infinite number your are making a mistake in logic as well in language

What is an "infinite number"?

http://www.mathsisfun.com/definitions/infinity.html

INFINITY
“An idea that something never ends. [ie .999[bar] never ends”

http://encyclopedia2.thefreedictionary.com/Infinite+number
“iinfinity, in mathematics, **that which is not finite**”

WHAT IS A FINITE NUMBER

http://www.mathsisfun.com/definitions/finite-number.html
“A definite number. Not infinite. In other words it could be measured, or given a value. [ie 1]” There are a finite number of people at this beach.”

To say an infinite number i.e. that which never ends [.999bar] = a finite number i e that which has a value [i.e. 1] is a contradiction in terms

Thus when maths says a finite number i.e. 1 = an infinite number i.e. .99[bar]
it ends in self contradiction or meaningless as a finite number is the contradictory of an infinite number and to say they are the same violate the law of non-contradiction
thus maths ends in meaninglessness

2)The Australian leading erotic poet philosopher colin leslie dean points out 1+1=1

get a salt shaker
pour out one heap of salt on the left
pour out one heap of salt on the right

NOTE WE ARE TALKING ABOUT HEAPS
now push the 2 heaps together ie we add them together
now what have we
we have one heap of salt in the middle
thus

1+1= 1

thus a contradiction in maths thus maths ends in contradiction ie meaninglessness-

now

ADDITION IE + MEANS TO PUT TOGETHER IE MORPHED

Thus + means being morphed

There is no problem with saying 1kg + [morphed]1kg ie morphed together=2kg

So the same applies to heaps/books/apples/cars etc

ie

but also 1 book + [morphed]1 book ie morphed together =1 book

similarly 1 car + [morphed] 1 car = 1 car

3) MATHEMATICS JUST AD HOC ARBITRARILY DEFINES AWAY THE SELF-CONTRADICTIONS IN MATHEMATICS IE BY AD HOC CREATING THE AXIOM OF SEPARATION THIS AXIOM IS IMPREDICATIVE BUT IT OUTLAWS/BLOCKS/BANS IMPREDICATIVE STATEMENTS thus ZFC contradicts itself and 1)ZFC is inconsistent 2) that the paradoxes it was meant to avoid are now still valid and thus mathematics is inconsistent

AUSTRALIAS LEADING EROTIC POET COLIN LESLIE DEAN points out mathematics is an ad hoc discipline and ends in meaninglessness

Burali-fortis paradox

In Burali-fortis day there was a set of all ordinals which resulted in paradox This set has been outlawed in set theory -because it sends it into self -contradiction. To avoid this paradox mathematicians ad hoc introduced the axiom called the Axiom schema of specification ie axiom of *separation*

http://en.wikipedia.org/wiki/Burali-Forti_paradox

"Modern axiomatic set theory such as ZF and ZFC circumvents this antinomy **by simply not allowing** construction of sets with unrestricted comprehension terms like "all sets with the property *P*","

Russell paradox

In Russells day there was a set of all sets which destroyed naive set theory-sent it into contradiction-so to avoid it set theory just introduced an axiom Axiom schema of specification ie axiom of *separation*

Modern set theory just outlaws/blocks/bans this Russells paradox by the introduction of the ad hoc axiom the Axiom schema of specification ie axiom of *separation*

which wiki says
http://en.wikipedia.org/wiki/Zermelo%E2%80%93Fraenkel_set_theory

"The restriction to z is necessary to avoid Russell's paradox and its variants. "

Thus we have two sets - which at one time did exist-which send maths into contradiction just being disallowed by adding an ad hoc axiom

IT SHOULD BE NOTED THE IRONY HERE Russell created the axiom of reducibility to   to get rid of paradoxes in mathematics by outlawing impredicative statements but Zermelo created an ad hoc   impredicative axiom the axiom of separation to avoid many paradoxes ie Russell's paradox Now there is double irony in this as many say Russells axiom of reducibility should be outlawed as it is ad hoc but the same mathematicians will not say the axiom of separation should be outlawed or dropped as it is ad hoc –HOW STRANGE
Also the ad hoc creation of this impredicative axiom of separation means 1)ZFC is inconsistent 2) that the paradoxes it was meant to avoid are now still valid and thus mathematics is inconsistent

As the axiom of ZFC ie axiom of separation outlaws/blocks/bans itself thus making ZFC inconsistent

Proof

http://en.wikipedia.org/wiki/Zermelo%E2%80%93Fraenkel_set_theory

3. Axiom schema of specification (also called the axiom schema of separation or of restricted comprehension): If z is a set, and \phi\! is any property which may characterize the elements x of z, then there is a subset y of z containing those x in z which satisfy the property. The "restriction" to z is necessary to avoid Russell's paradox and its variant

now Russell's paradox is a famous example of an impredicative construction, namely the set of all sets which do not contain themselves

the axiom of separation is used to outlaw/block/ban impredicative statements like Russells paradox

but this axiom of separation is itself impredicative

http://math.stanford.edu/~feferman/papers/predicativity.pdf

"in ZF the fundamental source of impredicativity is the seperation axiom which asserts that for each well formed function p(x)of the language ZF the existence of the set x : x } a ^ p(x) for any set a Since the formular p may contain quantifiers ranging over the supposed "totality" of all the sets this is impredicativity according to the VCP this impredicativity is given teeth by the axiom of infinity "

thus it outlaws/blocks/bans itself
thus ZFC contradicts itself and 1)ZFC is inconsistent 2) that the paradoxes it was meant to avoid are now still valid and thus mathematics is inconsistent
Now we have paradoxes like
Russells paradox
Banach-Tarskin paradox
Burili-Forti paradox
Which are now still valid
http://en.wikipedia.org/wiki/Foundations_of_mathematics

"One attempt after another to provide unassailable foundations for mathematics was found to suffer from various paradoxes (such as Russell's paradox) and to be inconsistent: an undesirable situation in which every mathematical statement that can be *formulated* in a proposed system (such as 2 + 2 = 5) can also be *proved* in the system.

In a sense, the crisis has not been resolved, but faded away: most mathematicians either do not work from axiomatic systems, or if they do, do not doubt the consistency of ZFC, generally their preferred axiomatic system. In most of mathematics as it is practiced, the various logical paradoxes never played a role anyway, and in those branches in which they do (such as logic and category theory), they may be avoided."

As the article notes the paradoxes are just avoided. How maths deals with these is by just defining them away or changing the axioms so they are dissalowed As wiki points out to avoid the paradoxes the axioms of set theory are revised

Now zermelo ad hoc introduced the axiom of *separation* to outlaw the Russell paradox which showed naive set theory to be inconsistent but this axiom is invalid as it is impredicative thus it cant be used to outlaw Russells paradox;.thus Russells paradox still stands

Australian leading erotic poet colin leslie dean points out Poincare and Russell argued that impredicative statements led to paradox in mathenmatics

http://en.wikipedia.org/wiki/Zermelo%E2%80%93Fraenkel_set_theory

3. Axiom schema of specification (also called the axiom schema of separation or of restricted comprehension): If z is a set, and \phi\! is any property which may characterize the elements x of z, then there is a subset y of z containing those x in z which satisfy the property. The "restriction" to z is necessary **to avoid Russell's paradox and its variant**

Poincare and Russell argued that impredicative statements led to paradox in mathematics

http://en.wikipedia.org/wiki/Vicious_circle_principle

Many early 20th century researchers including Bertrand Russell and Henri Poincaré. Frank P. Ramsey and Rudolf Carnap accepted the ban on explicit circularity,
The **vicious circle principle** is a principle that was endorsed by many predicativist mathematicians in the early 20th century to prevent contradictions. The principle states that no object or property may be introduced by a definition that depends on that object or property itself. In addition to ruling out definitions that are explicitly circular (like "an object has property P iff it is not next to anything that has property P"), this principle rules out definitions that quantify over domains including the entity being defined.

now

the axiom of *separation* of ZFC is impredicative as Solomon Ferferman points out

http://math.stanford.edu/~feferman/papers/predicativity.pdf "in ZF **the fundamental source of impredicativity is the seperation axiom** which asserts that for each well formed function p(x)of the language ZF the existence of the set x : x } a ^ p(x) for any set a Since the formular p may contain quantifiers ranging over the supposed "totality" of all the sets this is impredicativity according to the VCP this impredicativity is given teeth by the axiom of infinity "

Now as Poincare Russell and philosophers point out impredicative statements are invalid and should be outlawed from mathematics

Thus mathematics avoids its self-contradictions by arbitrarily adding ad hoc axioms

note
http://en.wikipedia.org/wiki/Dialetheism

“From the premises of classical logic and naïve set theory one can derive outright contradictions, a result that is traditionally frowned upon. The classical response to this problem is to revise the axioms of set theory in order to make them consistent.”
all this arbitrarily defining away problems go right back to the Greek who defined irrational numbers as not being numbers as they destroyed their maths
All in all Mathematics is nothing but an ad hoc discipline and a sham--EVEN THOUGH IT WORKS- it is philosophically absurd and ends in meaninglessness. **It becomes a mystery-that needs to be solved- as to**

why maths works in the practical world when it ends in meaninglessness ie self-contradiction

It should be noted that Godels first incompleteness theorem is invalid as

Godel used impredicative definitions – and as we have seen above many mathematicians and philosophers say these lead to paradox and must be outlawed from mathematics
http://www.scribd.com/doc/32970323/Godels-incompleteness-theorem-invalid-illegitimate

Quote from Godel

" The solution suggested by Whitehead and Russell, that a proposition cannot say something about itself , is to drastic... We saw that we can construct propositions which make statements about themselves,… ((K Godel , On undecidable propositions of formal mathematical systems in *The undecidable* , M, Davis, Raven Press, 1965, p.63 of this work Dvis notes, "it covers ground quite similar to that covered in Godels orgiinal 1931 paper on undecidability," p.39.

The impredicative statement Godel constructs is
http://en.wikipedia.org/wiki/G%C3%B6del%27s_incompleteness_theorems#First_incompleteness_theorem

"the corresponding Gödel sentence *G* asserts: "*G* cannot be proved to be true within the theory *T*""

4)MATHEMATICS IS NOT THE LANGUAGE OF THE UNIVERSE

AUSTRALIAS LEADING EROTIC POET COLIN LESLIE DEAN points out mathematics is just a bunch of meaningless symbols connected by rules

mathematics is not the language of reality
mathematics has no semantic content
mathematics is devoid of semantic content thus it cant say anything about reality

when meaning is overlayed onto the symbols we end in the Carroll's Paradox formalism in mathematics is an attempt to avoid the pitfalls of Carroll's Paradox due to semantic meaning being given to the symbols

1+1=2 are just meaningless symbols connected by rules it is only when we make the symbols correspond to reality that in this case we see we are dealing with numbers

Take the axiomatic system ZFC is just a bunch of meaningless symbols connected by rules of inference we give meaning to those symbols and say ZFC deals with a set

Mathematics is devoid of semantic content thus it cant say anything about reality
As
http://www.mathacademy.com/pr/prime/articles/carroll/index.asp
says

"The formalist solution, while effective, has its own philosophical drawbacks. Not the least of these is that, **by reducing logic to uninterpreted symbols**, all semantic content is removed from the conclusions of formal logic. In other words, **what we would ordinarily consider meaning is lost.** How to restore meaning to systems of inference while still avoiding difficulties such as Carroll's Paradox remains a thorny question for philosophers of mathematics

All in all Mathematics is nothing but an ad hoc discipline and a sham--EVEN THOUGH IT WORKS- it is philosophically absurd and ends in meaninglessness. **It becomes a mystery-that needs to be solved- as to**

why maths works in the practical world when it ends in meaninglessness ie self-contradiction

5) Australias lead erotic poet colin leslie ean points out Mathematicians cannot define a number with out being impredicative-ie self referential thus mathematicians dont even know what a number is- thus maths is meaningless All mathematicians can say is a number is a number –thus they don't know what a number is thus maths is meaningless

http://www.iep.utm.edu/predicat/

In many approaches to the foundations of mathematics, the property N of being a natural number is defined as follows. An object x has the property N just in case x has every property F which is had by zero and is inherited from any number u to its successor u+1. Or in symbols:

Def-N $N(x) \leftrightarrow \forall F[F(0) \wedge \forall u(F(u) \rightarrow F(u + 1)) \rightarrow F(x)]$

This definition has the nice feature of entailing the principle of mathematical induction, which says that any property F which is had by zero and is inherited from any number u to its successor u+1 is had by every natural number:

$$\forall F\{F(0) \wedge \forall u(F(u) \rightarrow F(u+1)) \rightarrow \forall x(N(x) \rightarrow F(x))\}$$

However, Def-N is impredicative because it defines the property N by generalizing over all arithmetical properties, including the one being defined.

again impredicative definition

Let n be smallest natural number such that every natural number can be written as the sum of at most four cubes.

again impredicative definition

http://en.wikipedia.org/wiki/Impredicativity

Concerning mathematics, **an example of an impredicative definition** is the smallest number in a set, which is formally defined as: y = min(X)
if and only if for all elements x of X, y is less than or equal to x,
and y is in X.

http://en.wikipedia.org/wiki/Set-theoretic_definition_of_natural_numbers

A consequence of Kurt Gödel's work on incompleteness is that in any effectively generated axiomatization of number theory (ie. one containing minimal arithmetic), there will be true statements of number theory which cannot be proven in that system. So trivially it follows that ZFC or any other effectively generated formal system cannot capture entirely what a number is.

Whether this is a problem or not depends on whether you were seeking a formal definition of the concept of number. For people such as Bertrand Russell (who thought number theory, and hence mathematics, was a branch of logic and number was something to be defined in terms of formal logic) **it was an insurmountable problem.** But if you take the concept of number as an absolutely fundamental and irreducible one, it is to be expected. After all, if any concept is to be left formally undefined in mathematics, it might as well be one which everyone understands.

Poincaré, amongst others (Bernays, Wittgenstein), held that any attempt to *define* natural number as it is endeavoured to do so above is doomed to failure by circularity. Informally, Gödel's theorem shows that a formal axiomatic definition is impossible (incompleteness), Poincaré claims that no definition, formal or informal, is possible (circularity). As such, they give two separate reasons why purported definitions of number must fail to define number. A quote from Poincaré: "The definitions of number are very numerous and of great variety, and I will not attempt to enumerate their names and their authors. We must not be surprised that there are so many. If any of them were satisfactory we should not get any new ones." A quote from Wittgenstein: "This is not a definition. This is nothing but the arithmetical calculus with frills tacked on." A quote from Bernays: "Thus in spite of the possibility of incorporating arithmetic into logistic, arithmetic constitutes the more abstract ('purer') schema; and this appears paradoxical only because of a traditional, but on closer examination unjustified view according to which logical generality is in every respect the highest generality."

Specifically, there are at least four points:

1. Zero is defined to be the number of things satisfying a condition which is satisfied in no case. It is not clear that a great deal of progress has been made.
2. It would be quite a challenge to enumerate the instances where Russell (or anyone else reading the definition out loud) refers to "an object" or "the class", phrases which are incomprehensible if one does not know that the speaker is speaking of one thing and one thing only.
3. The use of the concept of a relation, of any sort, presupposes the concept of two. For the idea of a relation is incomprehensible without the idea of two terms; that they must be two and only two.
4. Wittgenstein's "frills-tacked on comment". It is not at all clear how one would interpret the definitions at hand if one could not count.

These problems with defining number disappear if one takes, **as Poincaré did, the concept of number as basic ie. preliminary to and implicit in any logical thought whatsoever.** Note that from such a viewpoint, set theory does not precede number theory

ISBN 9781876347317