

The generalisation programme – technical synopsis

by Jim Adams © 2015

- (1) Convert all theorems on rings and exponentiation to superexponentiation theorems.
- (2) Apply exponential algebras Dw , where $i^i = i^n$, $w = 1$ to 4 , to L-functions and investigate the Riemann conjecture using these algebras.
- (3) Extend hyperintricate and non-matrix theorems, including for Lie groups and algebras.
- (4) Develop and extend homology and cohomology type operations including spectral sequences to branched spaces.
- (5) Develop all theorems within the framework of subobject classifiers that are more than 2-fold Boolean. This includes description of intuitionistic theories. All logical operations (including implication) should be subsumed in the n -valued logic. All objects should be defined within an accessible superobject.
- (6) We have also jettisoned Galois theory, so the theory of varieties and the replacement for schemes and stacks will have to be developed.

Technical notes. We are abandoning topos theory, which is the categorical replacement for the theory of sets. Superexponential algebras are not associative, and therefore do not reside within category theory. We need to invent a name for a superexponential set, say for now a hyperset.

A topos has subobject classifiers, so n types of subobject exist within a n -valued logic. This we retain but may generalise, in particular for intuitionistic logics. Toposes have all finite limits, and ladder numbers discard these, so this will not be present in the theory to describe (5). Further toposes have a power object, and as we have seen in the paper on ladder numbers, we dispute standard theory (the continuum hypothesis), so that all superexponential operations on a set do not extend its cardinality. This is a new type of axiom.

The work on branched spaces will start again in September 2015, and the initial extension will be to describe explosions using the work of Serre on trees, which describes free groups, and so we will be able to see that the extension of exact sequences to the right or left for Ext and Tor, because the boundary of a boundary does not hold for groups, can be combined with the theory of ladder numbers, giving new algebras for spectral sequences. The work on branched spaces already performed can now be seen in a new context, so that a general branched space is a reconnected explosion, and classification of this theory proceeds by specifying types of regularities for these reconnections.