Using Hyperpanometrics for complexity modelling and analysis

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When we examine our universe, we have sets of rules or laws, from which we gain an understanding, create measurements and reproduce in model form a scaled series of observations to explain a series of interactions between objects of interest. Our universe gives an environment from which to explore, navigate, experiment and study so that we can make sense of it, providing we remain within the boundaries that are established by nature.

However, there are limitations on how well we are able to use mathematics to create models of our universe, and to what degree we can represent the complexities of our environment. More often that not, it is impossible to accurately represent a greater number of variables or complexibilities, due to the mathematical limitations of being confined to the laws of our Reality. Through bounded rationality, it is however possible to limit some for the complexities, and entertain some types of exploration. Through the development and use of computer modelling, it is possible to extending the exploration of different scenarios, and then link them back to real work observations.

The theory of Hyperpanometrics is that, in effect we change the laws of nature, to be able to model the complexities of our universe. We establish alternative universes, where we have the power to establish our own laws of behaviour, and can adjust the degrees of measurement and inter-relativity. We are able to give data observations & variables physical properties, and define their behaviour the same way as we do in our universe. Through establishing a series of reference points that are common to both the real universe and the artificial universe, it is then possible to have observations that have meaning in both environments.

Hyperpanometrics is what you might call the measure's measurement, it is designed to work with the differences between various types of standardised measurements to then be able to map those differences and then plot them in an artificial universe. The concept is to convert any series of observations into interval data, and then to be able to plot these observations. The system requires a series of observations and that the measurements are consistent. The same way that we can use Newtons Law of Motion or Einstein's Theory of Relativity to explain movements in our universe can be used to explain a data track through a series of Variable Gateways within an alternative universe.

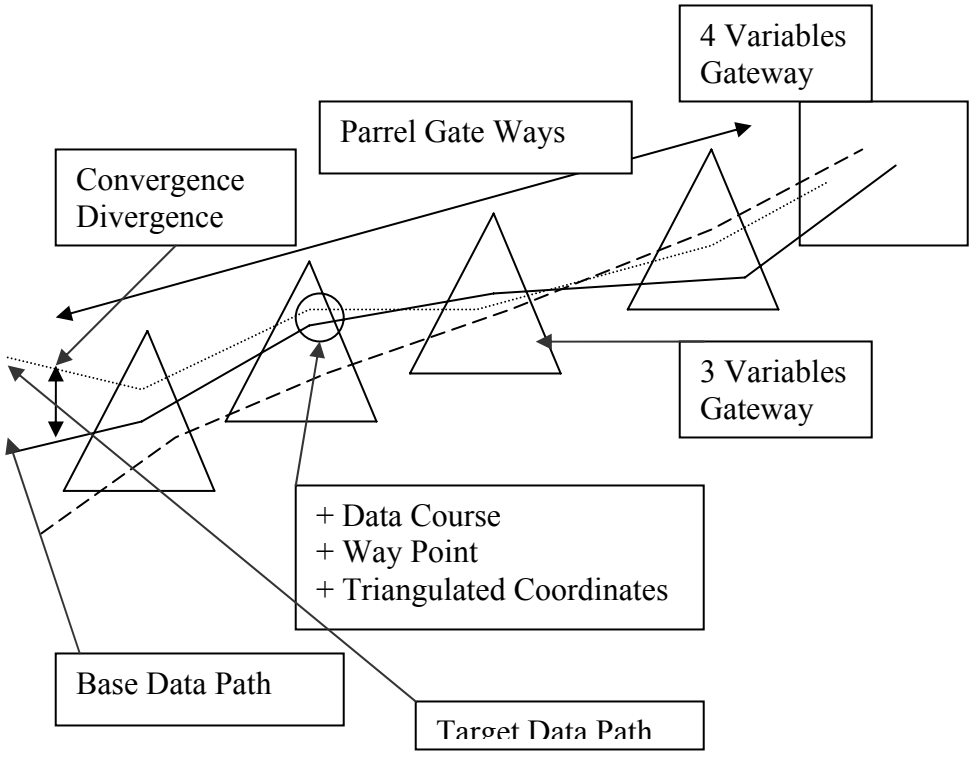
Alternative universes are the creation and exploration of a mathematically generated reality, where the laws of nature are defined and control by a different set of rules to the ones that exist in our reality. This allows for a greater number of possible connections, interactions and combinations of elements that are limited or impossible in our reality. Through bounded rationality it is possible to constrain and adjust the different levels of complexities, and set boundaries for definitions and constructions of the artificial elements. By using a index of reference points, that represent factors in both our reality and the artificial universe, it becomes possible to translate the variables, observations and results from one to the other, and thus achieve a linked correlation between the two.

Hyperpanometrics is the process of using a series of plotted data points on a map or graph, where their positions are determined through a calculative navigational triangulation within a geometric or topological framework. Each data-point is a derived constructed unique representation of a number of time/space restricted observations, from a number of variables. A waypoint [constructed data point] is then plotted in reference to its time/space defined gateway. Each gateway is a separate finite mini time/space based reality, that when combined with other gateways constitute the artificial universe. Desired waypoints are linked together to form a data-pathway. Thus it becomes possible to observe the behaviours of these data-pathways in relationship to each other. The examination and measurement of the bearing / degree of movement [divergence, parrel, convergence] of intra-variable and inter-

variable movements within a hyperspacial environment, provides an insight into the dynamic relationships within complexity modelling.

Just like in Newtonian physics or newtons law, of motion. An object will go in a straight line unless acted on. When you combine this with Einstein's theory of relativity, where space and time limit an observational point. When you have parrel observation points, logic dictates that unless a data path is attracted towards an attraction point in some way, the data path will also change. Hyperpanometrics uses the adjustment of these attraction points, in accordance with construct and variable observations. These data paths will transverse through gateways from one parrel observation point to another, in a continuous motion, unless altered. The analysis of this system comes from the bearing and distance from one data path to another, and the movement between the data paths as they converge or diverge. The direction of that movement is dictated from the change in the values of the attraction points. The number and type of variables define the size and shape of the gateway. Gateways can be in either 2d or 3d. Target data path and baseline data path. Hyperpanometrics is the measurement, we aren't interested in the directed observation, but more the movement between data points. Hence its an between group or within group principle. Movement is refined into the logarithmic. It is possible to have difference geometric shapes as gateways, with a different configuration, as this can be used to observe the influences and impacts.

The following diagram is an example of how the process works, on a 3 variable then a 4 variable take up. It shows how it is possible to compare the results. How the gateways and waypoints work. Please bear in mind, that this is a 2 dimensional representation of a multi dimensional system.



Through the use of Fuzzy Logic, Interval Mathematics, Granulation, Geometric Modelling and Finite Mathematics it is possible to establish a series of numerical measures that transcend the traditional boundaries of the four main scales of measurement. It is also possible to create a number, which represents not one variable observation, but a group of variables observations. This increases the flexibility of Complexity Analysis, by being able to have one number mean many. This would be achieved through the use of Nolan's Matrix.

The matrix is now a finite mathematical model, using hyperspace Euclidean distance measures within a quasi fractal framework using granulated interval clustering. The variables are assigned notational references for

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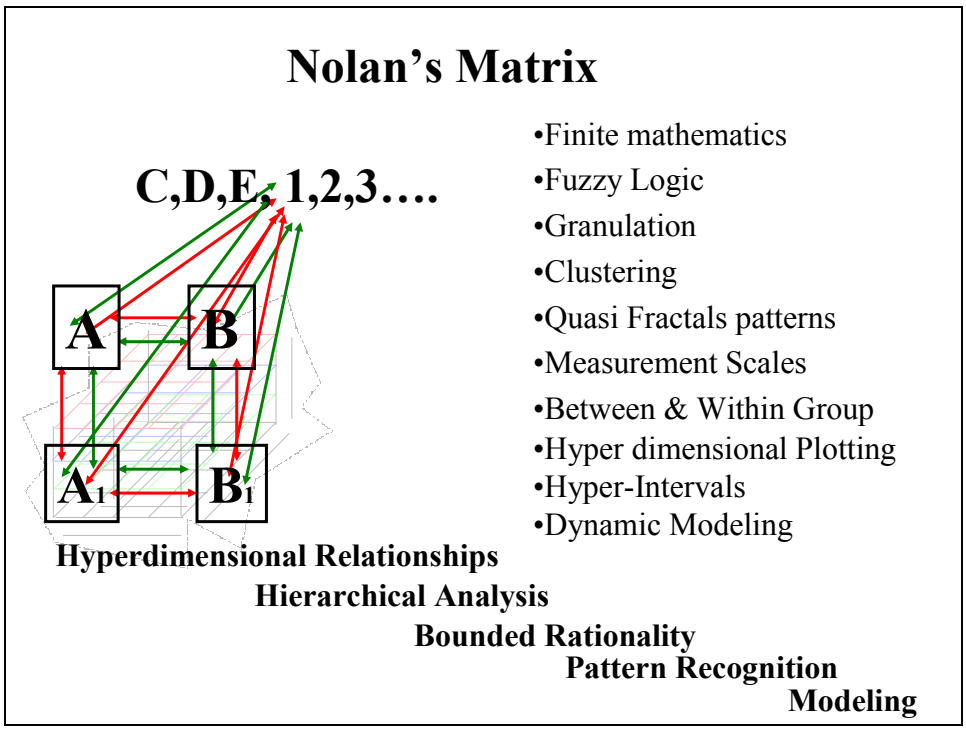
each stratum, allowing for extra refinement, interpretation and classification of variables. This is achieved through using a bounded rationality approach tot he labelling of each matrix, and the variables thus represented.

The end result, is a matrix which can model a multitude of variables which have consistent observations within the same measurement scale, however there is no longer the requirement for all variables to use the same measurement scale. Since the development of relational databases and faster computer chips, etc. The easy of using the matrix, it has already been experimenting in the some of the follow areas;

- Multi dimensional control systems,
- Artificial life forms,
- Smart probes,
- Decision making systems,
- Criminal signposting,
- Simulations.
- Autonomous control systems.

The presentation will cover some examples of how an Hyperpanometric approach can help with the reduction of complexity. The presentation will also show ways that Hyperpanometrics has been able to increase the effectiveness and sensitivity of standardised statistical methodologies.



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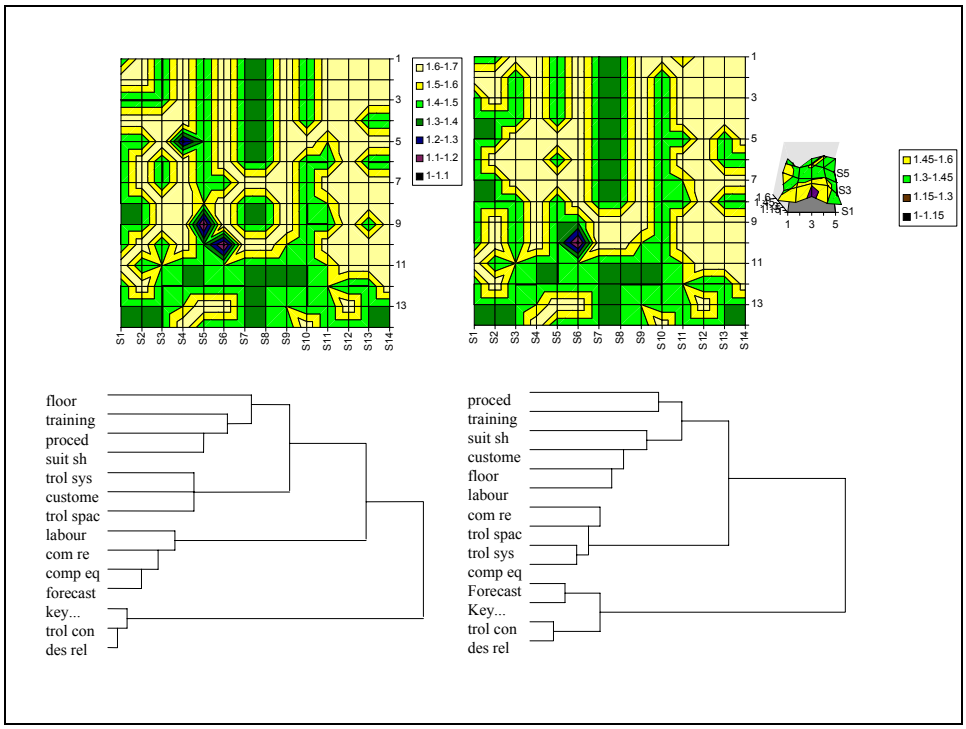

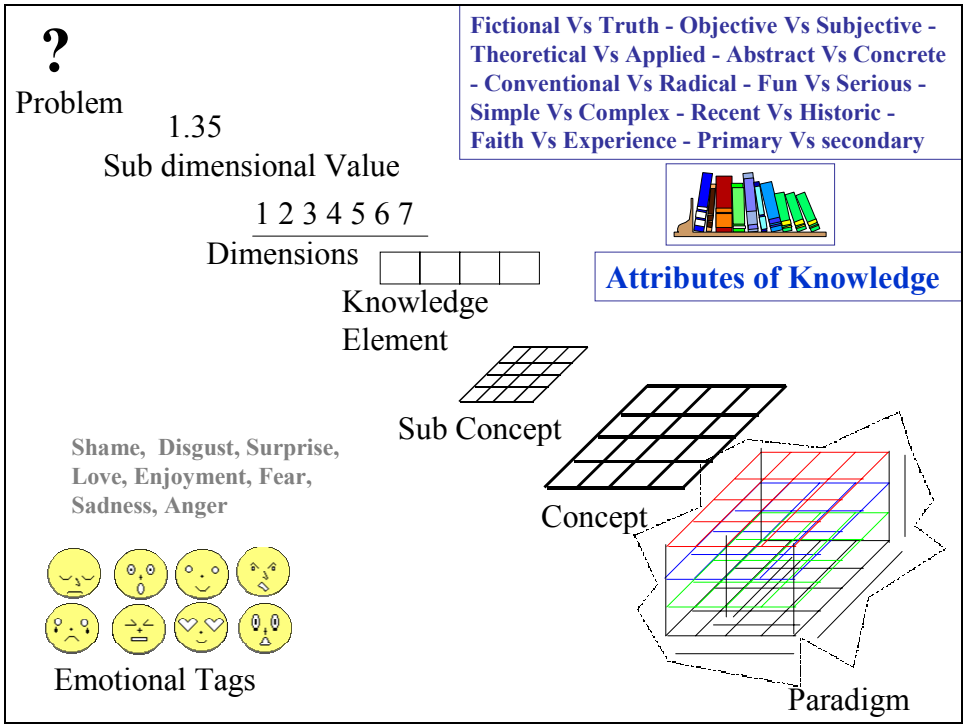

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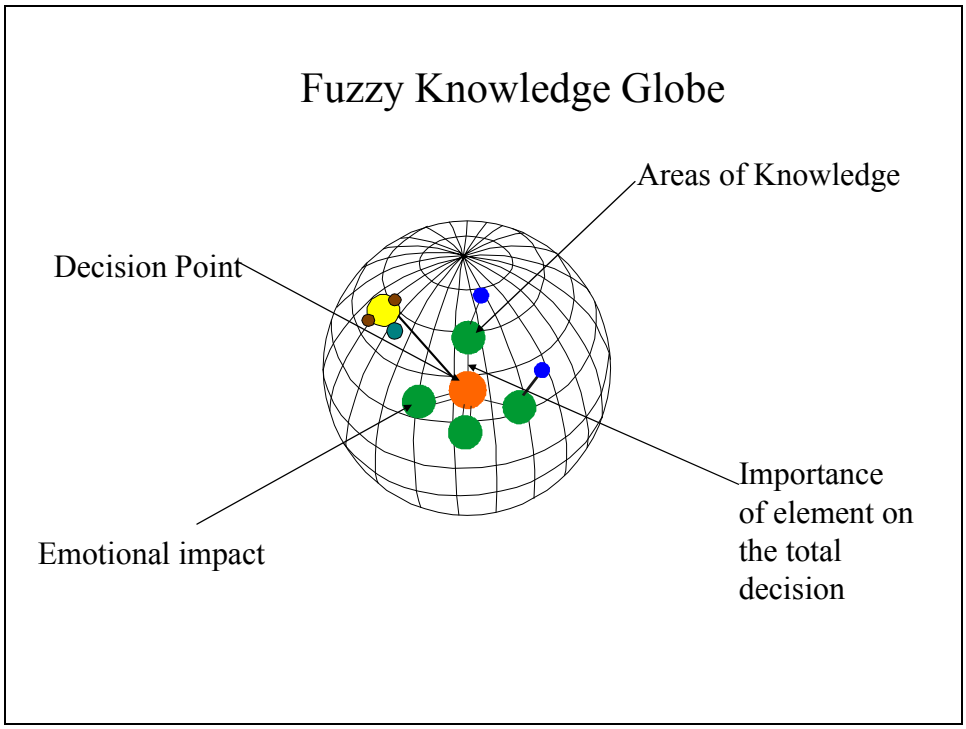

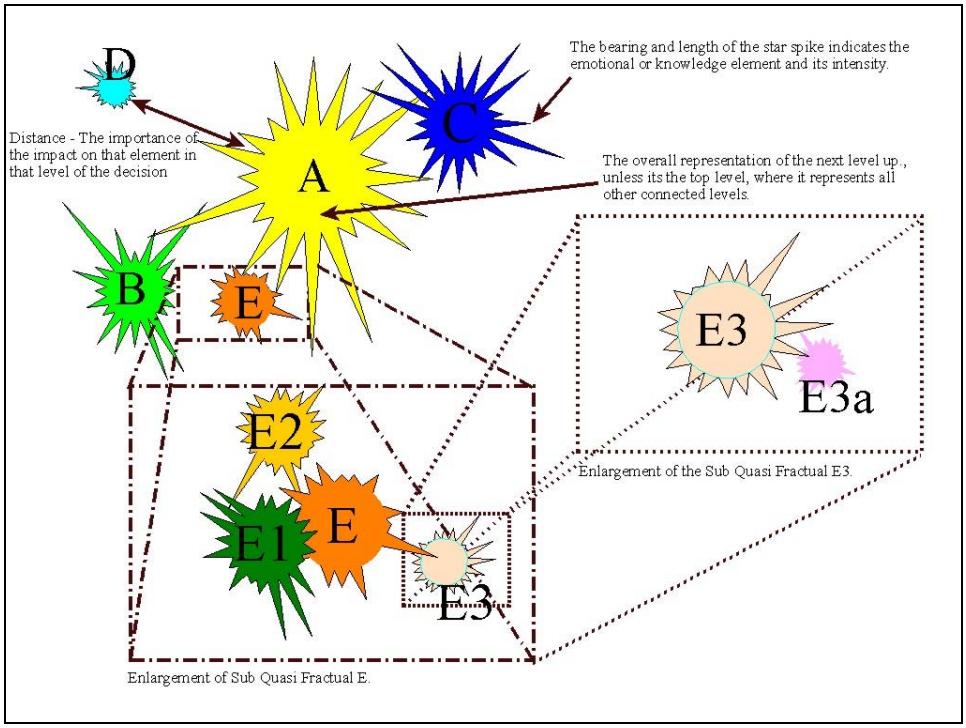

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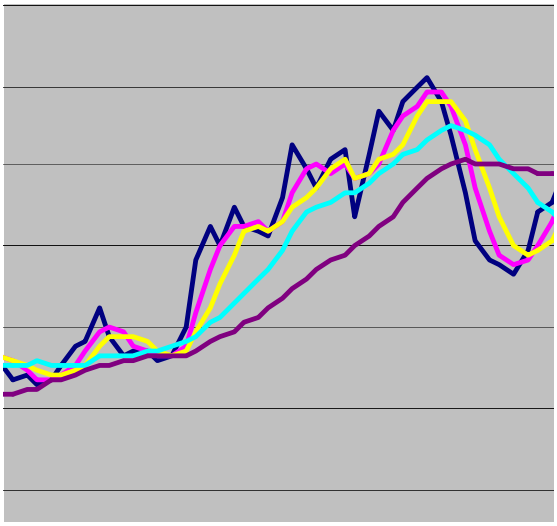
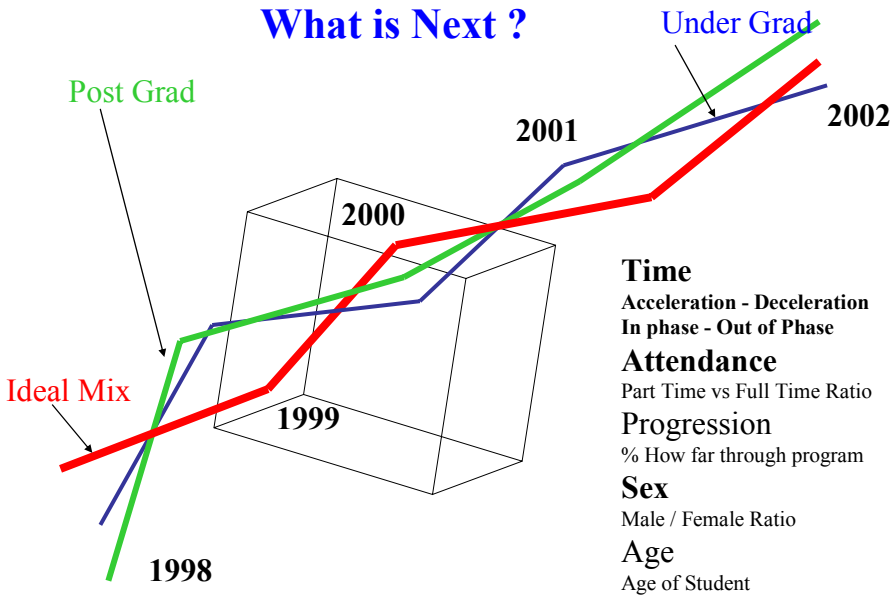
Graphical Analysis



By working out the hierarchy and the position of the coloured lines, you get a very sensitive measure and a trend predictor which indicates a change in the share price.



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