**Key notes from sources**

|  |  |
| --- | --- |
| **Farradane** | **Parsons** |
| Everything is an entity or a property | Everything is an entity, property, constraint or relation |
| 4 basic operations: (Equivalence, possesses, caused by, causes) **1950,** Added 4 more operators (Dimension, Concurrence, Association, Comparison) **1952** | 4 basic constructs: (Existence, property, concept, composite) |
| Classes are tree headings, and the only constraint is that they contain all classes below them | Classes have 4 constraints and are formed of both entities and their relative properties |
| Global schema | Only considers things in the relevant ‘universe’ |
| Not based on set theory | Based on set theory |
| Classifies by knowledge question in natural language | Classifies by entity |
| Needs complete knowledge of the language base before you classify | After a base corpus has been made, it can be added to or removed without changing the entire system |
| Resulting classification is of a subject heading as opposed to the object itself | Resulting classification is made up exactly of individual elements |

**Categories, formal concepts and metaphysics:**

* “Matter cannot be specified by reference to ordinary descriptive concepts”

**Ordination on the basis of fuzzy set theory:**

* Fuzzy sets have grades of membership and are expressed {(x,fx), ..etc}
* In fuzzy set theory opposites are one complements (1-x)
* Fuzzy sets can be chained together with logic statements in the form (union (or), intersection (and), complement (not))
* Anticommutative difference – “while not”
* Similarity algorithm – Tversky index :

* Take anticommutative difference of sets with memberships as similarity values to find true membership values, the highest one of which gets the item put into that class

Where

**Set-theoretic absoluteness and revision theory of truth**:

* We must allow for isomorphisms
* It’s easier to disprove than to prove

**Knowledge and certainty:**

* Knowledge in something requires truth, belief and certainty
* Unger doesn’t believe in fuzzy sets and believes that things are absolute

**Inescapability of Gettier problems:**

* Having a model that works doesn’t make it ‘proof’ or the only true model
* We cannot exclude the possibility that the model is wrong but by chance seems to fit

**Scientific theory of classification and indexing: further considerations:**

* Entities can be graphed with each operator acting as a dimension (can use colour as a 4th): In my own situation could plot properties as values then colour as classification

**Chart, radar chart

Description automatically generatedNote that this doesn’t tell you what each line label actually is, just gives an indication of the fit of the model**

* More operators exist for complex structures
* Parallel coordinate plots are probs best for checking fit of model