Humanitarian ontologies

I've been thinking a lot about humanitarian and development data lately. Helping, even, with the UNGIWG catalogs of what the UN is holding and how to obtain it. And thinking about how best to make it available to an analyst - given what will hopefully become quite large datastores, how to traverse between datasets, crisis indicators and proxies .

Which actually leads to three ideas.

A lot of the data isn't useful in itself. What it's useful for is the effects that it shows on more direct indicators and variables. For example, the UN data includes divorce rates, marriages, deaths etc. These don't tell us as much about vulnerability to crisis as the variable that connects them: household size. And wouldn't it be nice to have an ontology that makes these variables explicit so we can link them to the proxies (the terms that we search for, like 'household bills'), indicators (the things that humanitarian surveys are looking for, like 'switched to cheaper foods') and metadata (the 'headings' in each datastore).

To make this useful, we'd need to display these connections. And a natural representation for this is a graph (or an indented list if you're in a low-bandwidth environment). This post could be useful here: I'm visualising an expanded box showing the main features of a node, with links out to connected nodes that could be clicked on to bring them into detail focus too, perhaps with a simple clickable breadcrumb trail (a wiki-like heading of a>b>c>d) to show the user how they got there. It's a nice neat self-contained piece of work for someone.

As is this: using the connection-learning algorithms from Mwebase et al to surface some of the connections between indicators and data.

References:

- There's a lot of work going on in crisis ontologies at the moment. These are tangential to the needs of slow-burn crisis ontologies, but might overlap, and might provide some useful existing pointers.
- @medic have developed an ontology for disease systems - what we're talking about above could be seen as a widening of this to all humanitarian slow-burn crises. Instedd's Evolve project is also interesting for this, but note that diseases are a special case - you now what you're looking for, can track from disease to symptom and don't have the causal complexity that slow-burn crises are likely to contain.
- The Activesa (OWL) ontology looks like a promising, albeit a bit militarily-focussed, starting-point. The University of Southampton group have been working on humanitarian situation awareness from a military perspective for a while now.
- And of course this discussion wouldn't be complete without pointing to FAO's geopolitical ontology - useful for situation that knowledge once you've got it.