

Resolving Sentences and Such



**Active
Structure**

Clicking Through Alternatives

How do we find the correct set of alternatives when we have multiple sources – yes/no to a wordgroup or collocated verb, is it a noun or a verb, a dozen different definitions for a word, or an existential negation causing ambiguity?

We don't have a metric to judge the "correctness" of the sentence – the sentence, context and source may be telling us something we don't initially believe – the sentence has to be its own metric.

If We Can't Simply Click?

Instead of building a tree of selected alternatives, we can have multiple centres of activity using threads, each pushing back on the others.

We could explore the extent of the pushback, so we can see the “power centres” of the sentence.

There are some things we can definitely do - if we have a noun/verb, and can prove it isn't a verb, it must be a noun.

“Pushing Back on the Others”

What does that mean? Why is it different to just selecting one option out of several, and letting the effect of selecting that option spread?

Pushback can lessen the setting from True to something less than True, giving a better idea of the real state of the structure.

But won't we get bogged down – Yes, there is a thousand year flood, but it is easier to ignore remote possibilities.

Sometimes we will be charged with dealing with extremes – need to be able to recognise when.

An Example of Pushback

Learning Something New

If we are learning something new, we won't be able to resolve a sentence by itself – the picture is not complete, we don't understand that the words being used mean something different.

So how long do we need to leave something open – sometimes hours, sometimes years.

Does that mean we can't use it in the meantime?
No, if we did that we would never see the larger picture.

A Learning State

OK, we are going to learn something new, but we won't understand any of it until we can see almost all of it. How do we handle that?

It may not be in an educational setting – the equivalent of a classroom – instead mixed in with normal activities like answering simple questions (“Am I covered for Botox”), and the machine is simultaneously trying to get a fix on the human psyche (“why would they even ask that?”).

How Do We Avoid Building a RWNJ?

It would be much easier to build a deeply conservative machine, one which considers that everything it doesn't know must be wrong, or must be fake news – effectively, one which runs on statistics (see ANN, Machine Learning).

We could demand total belief in anything we said, and have it treat everything else with suspicion, but that would be wrong too – we are not going to be right all the time. It will need critical thinking.

So What Is Critical Thinking?

It sounds nice, but no argument is going to be wholly consistent and coherent – there simply wouldn't be the time or the interest to do that. The human proponent of the argument can only manage four pieces in play, so when the machine opens up other areas, the argument may start to look dodgy, or at least very thin. But this would happen with every argument, so what to do – only use it a bit?

True and Maybe Not

How do we handle something that is a fact and seems to dispute something we are trying to learn about?

“This winter is colder than usual”

Yes it is – does that dispute global warming?

Much longer timescales are involved – how does the machine know how to handle facts in an overarching structure – how did we create the overarching structure in the machine? Will we need to break out of the text paradigm (Everything can be described in text) to do so?

States and Structures

What do all these states and structures we seem to be introducing look like?

How do we cordon off an area and say it is under construction?

Or, when the construction is finished, how do we create the states in it?

Or does construction never really finish?



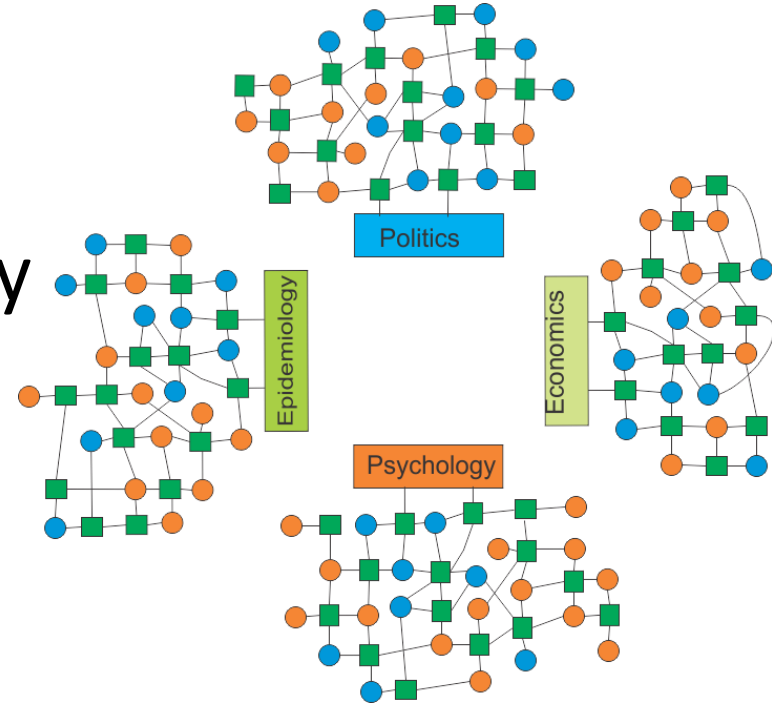
Monitoring Progress

Rather than just building a new structure “blindly” and without a plan, it would help if, as soon as the structure could form an opinion, it was compared with what the current solution was, and the difference used as a guide for further construction.

If we have a detailed plan of what to build, we end up with a historical artefact – last year’s or last week’s take on the problem.

Machine Collaboration

What happens if we allow machines to specialise – one knows epidemiology, another knows economics or psychology or ethics – will they be just as ineffective as humans in collaborating, or will they be able to see inside each other? Do we bother with getting this right now, or worry about it later?



Don't Bite the Hand That Feeds You

We could have a muzzle on the machine's output, which would probably mean most of its efforts would never see the light of day.

Or we could distribute through its structure some notion of "Consider the human viewpoint, and have a good case if you wish to go against it".

Down in the Weeds 1

The mayor of Providence has urged residents to “socially shame” anyone not wearing a mask or gathering in large groups.

The “not” does not extend across the “or”. How are we going to know that?