GA)

Army of information spread as an array of actors where some actors contain elements of more optimal solution even though these actors dont represent the optimal solution

GA actors as distributed search for rules in system

... each actor need not contain the whole rule set... just part of the rule set that might lead to a more optimal solution

What make a good Stew?

~~Requir~~

- Required to pass through nearly all points in state space to reach global maxima

- maximum ~~tour~~ number of ~~local~~ local maxima requiring 1 bit in one domain to escape to next local maxima

↖ increases / maximizes coverage of state space

Q) why should there be a single global maxima and not maximum number of local maxima with equal max value?

~~A) the search stops at the global maxima~~

~~A) state change~~

A) the search is a continuous movement to state with a better fitness. activity happens only on move to better fitness ~~state~~ state. there is no move to a lower fitness state.

If the goal is to maximize # of moves

If the goal is to maximize # of moves...

You want local maxima in each set of domains to maximize search

If you expand domains to search

search A + B

for maximum search duration you want search of A + B to require a full search of A for every state in B.

~~Q) Do we want or constructed system~~

Q) For our ~~sy~~ constructed system...

Do we want to maximize the length of the search for global maxima?

Is this longest search ~~same as~~ same as an optimal hierarchical construction of sub domains?

Is this maximal search same as maximal information for X number of independent domains?

Yes?

This assumes maximal search based on search by single actor? But what about maximal search by multi agent ~~actor~~ actor like a GA?

Q) For our constructed system ....

Do we want maximal search duration?

May search duration for single actor equals highest information density in terms of information / # independent domains.

There are analogies with signal / info theory

higher density = harder to duplicate

redundancy = lower density = easier to capture and duplicate

In terms of sampling / duplicate

- multi actor search / GA search works better, if there is some redundancy in the info
- for synthesizing hidden structure redundancy is very helpfull

Conclusion / Premis:
our world / target is X

May Density ⟩ X ⟩ Min Density