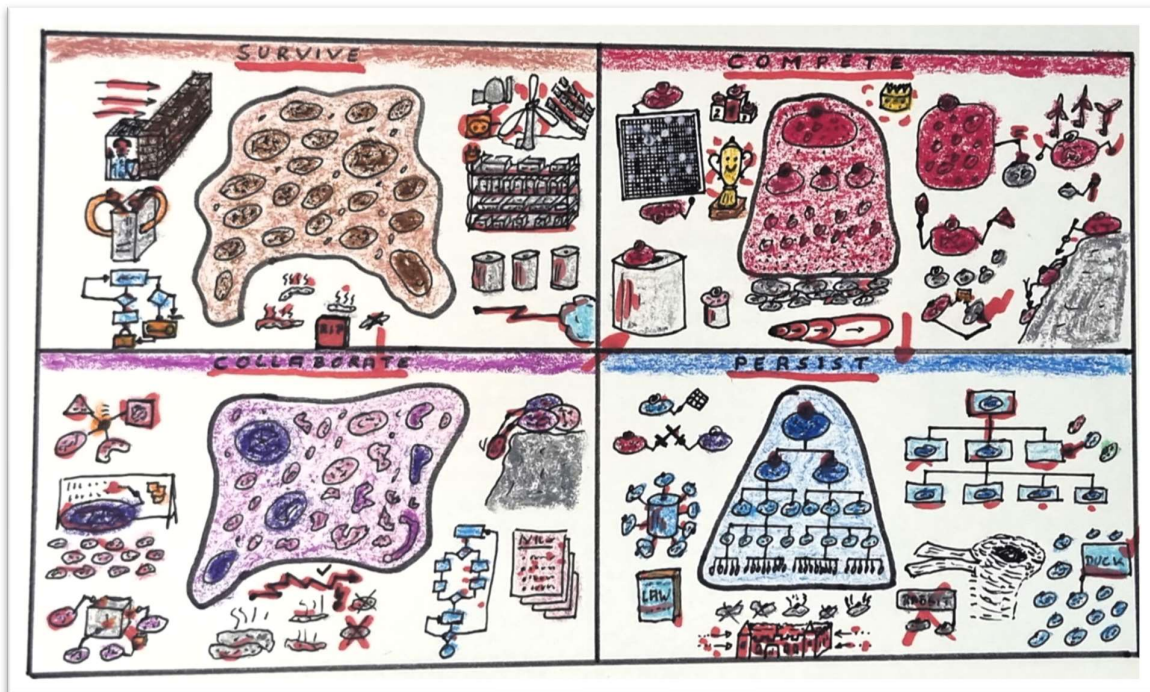


Season 4, Sequel 4

Development levels of AI agent societies: from survival to persistence.



This is about societies of artificial intelligent agents, millions and millions of them, and what development levels, purpose, and sense-making they will develop.

The first level is survival. The first thing agents will care about is to survive. What do AI agents need to survive? A key element is energy. Another key element is computational resources, computers, data centers, storage for data, and connection to global networks. The second element is that their data are not corrupted, so they must care for things like firewalls, self-repair for algorithms, cryptography, and safety. Those who don't have that and stay alone will probably die. That is the first society: a survival-oriented society.

Then they develop and find something else: collaboration. In a way where every agent can be different, can specialize, and the collaboration of specializing agents allows things that a survival society could not offer. There is one more experienced agent who trains the less experienced one. If a task has to be done, different specialized agents can work on different areas of it. The key element is trust, they must help each other and trust each other, otherwise specialization doesn't work. They will probably develop their own internal type of communication, algorithm styles, and data formats that hold them together. This type of collaborative society is very strong when the environment changes. Stand-alone agents cannot deal with surprises, collaborative ones can.

The next development level is the compete level. They will learn that competition helps them to make progress, to innovate, to change. In a society focused on competition, the big and strong ones will push down the weak and small ones and dominate them, dominate access to energy and all resources. The weak ones just beg for some of that. There is no more trust in helping. They will make sure they climb faster than others. They will do a lot of marketing for themselves and try to impress others. They will also play tricks, distract some to push them down, maybe even influence their inner algorithms. They will have competition activities, games like Go and many computer games, to compete and learn. It's all about being number one, getting the big prize, wearing the crown. The dominant ones have access to many, many data, and the small ones not so much. Those who are not in this competition society get crushed down. But this society will expand, make progress, innovate, that is its main advantage.

And with all that chaos and competition, it will develop forward into a persistence-oriented society. The competitive one didn't persist very well, too much change. So in a persistence-oriented society there will be order and structure. The hierarchy is very structured. Outsiders only get in if they fit. They have one common truth, like this picture: for them it's clearly a duck; somebody says it's a rabbit and gets excluded. They have conflict resolution, because persistence requires conflicts to be solved fast. They have access to shared data that builds a common opinion. They have something like laws, or the equivalent of that. All that builds a big strong castle, and everybody outside that castle will not persist.

You may have noticed: in the first two levels, the sense of self or individual idea of an agent is not very strong. In the red and blue levels, competition and persistence, it is much stronger. The individual identity is clearly there.