I really also want to talk about the idea of implementing a virtual world and several agents on an HPC such that one machine realizes the world itself while each agent gets its own entire core for processing. I want to give the casual observation that:

* Robotics researchers who design for one entity are focusing a lot on agent’s perception within the real world, so they typically don’t use virtual worlds as a testbed (could be wrong), and
* Game/Sim researchers design to scale AI WRT the other NPC’s and realization of the world all shared by a process if not a max of O(c) threads thereof within one or a max of O(c) cores; so they cannot realize the most intelligent NPCs that are technically possible.
* There are researchers in virtual agents, chatbots, etc. which have made some great recent gains vis-a-vis ML methods; but the main and critical difference between their agents and NPC’s is that for virtual agents: the implementation of personhood and independence from the user is not as necessary, nor high a priority as with NPCs; and can even be irrelevant if not completely undesireable features.
* Therefore: I’m left to believe that few if any substantial research projects have occured wherein NPC agents sharing the same virtual world are given as much processing power as possible for the purpose of determining the capabilities/limits of many of the models and their capabilities disucssed in my report. Everything from the evolution of their KBs to that of their intersocial connections e.g. the “implicit and latent data ‘non-structure’ composing their society”.
* I want to develop an experiment wherein a simulation is run (via a game engine) consisting of a small environment ( coastal village, space colony, rural private college, etc. WLOG) inhabited by ~100 NPCs of the capabilities discussed in this paper.
  + The experiment is run on the HPC such that one core is given to the world to maintain its state and support such perception thereof for the agents; and where one virtual core of equivalence to a standard gaming PC is given to each NPC with as much capacity as possible (perhaps even as a custom super-lightweight machine WRT underlying OH, other system services, etc.)
  + The NPC agents will interface with each other through the world, and to the world via quite simply “logging into” the virtual world just as human players would. Indeed - human observers to this experiment would enter and interface with the NPCs in almost exactly the same way (WLOG to specifics such as different inputs / percepts / etc. but it’s generally a ‘package of inputs and outputs’ in any case…)
  + The purpose of the expeiment is twofold for two areas in NPC intelligence which I am quite confident have not had their capabilities fully explored (as constrained by the aforementioned) nor limits fully tested; for which I believe would reveal some major insights! First: to implement the greater interconnected architecture we have discussed and suggested as a possibility throughout this report - as they would, under this experiment, have significantly more computing processing power behind them. This would directly test the capabilities and limits thereof, by allowing an experimental testbed. The second area follows from the first: evolution | duration. I want to run this experiment nonstop for an entire year, and observe the evolution of the characters internal and social psychology/devleopment/evolution throughout the year. I do not believe, from all the research I’ve yet done, that a simulation of NPC agents of the individual personal and social interpersonal intercapabilities discussed and levels thereof in this report has ever been attempted; nor that experiments of such agents has ever been done for long term durations.