Simulation, Noir

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It was three ten in the morning when the smell of cordite and the memory of an unpleasant burlesque woke Jake Kadigin from an overwise delightful sleep. He'd been dreaming of dancing with a group of increasingly beautiful marionettes. Each dance had been of added intricacy, building to such a complexity that in the final moments before it all went sour there was little he could do but recline backwards into the cat's cradle of strings and be bound to the dancers himself. As his mobile phone implant injected unpleasant memories directly into his consciousness, the dancers became grotesques and the strings lit fuses, and what had started as a warm delight became a dark struggle from which he woke with a start of recognition. Must change that ringtone.

The call was from The Simulation. The Simulation had had other names over the years, but after the first ten pilot projects and the following thirty development studies, the group had run out of smartarse acronyms, and so the model, which spanned some six continents, had been worn down to just "The Simulation", which Jake felt was suitably ominous. Acronyms were for government funding, and Bush Jr. III had knocked that on the head after the MORMON simulation results came back. Well, a call from The Simulation was a call you had to answer, and he patched in. The Simulation recounted its calculation paths for the previous evening and then issued a warning: a socioquake, and a biggy. So biggy, infact, that Jake sat back on his bed and considered which family members he might phone before he looked into it. As it was, The Simulation had already booted his home terminal and was demanding a response. Jake nevertheless called his sister in Baltimore and blearily told her answering machine to stock up on tinned food before turning his attention to the terminal cube. The globe floating in the cube showed the North East US throbbing a cancerous red, the devastation sweeping out through both the transport and financial networks to other areas of the world, death tolls accelerating each time Jake rubbed his eyes and tried to focus on the issue.

The Simulation was a construction so beautiful that aged programmers had been known to break down and weep before it**. A total behavioural encapsulation of the human race, gridded to every known dataset the globe collected.** Ok, so that beauty came at a price: $200 billion a year and 20 separate wind-farms; it had also turned Jake from a bright young fella into an insular wreck. But, oh, the wonder of it. The Simulation was still based around its core functionality – socio-economic prediction, but it could do so much more. The ability to **upload behaviours across a variety of social scales** allowed the system to act as a gigantic **validator of social logic** – new discoveries uploaded as viruses by everyone from transactional psychologists to playground monitors could compete in the system for sociological survival. The Gödel Module integrated new

behavioural models and **assessed their consistency with current theory and for internal completeness**, identifying strings of behavioural incompatibility, pinpointing potential hypocritical paradoxes, and revealing new holes in our understanding. Once a new behaviour was validated logically, it was tested quantitatively – introduced to a generalized model first, and then to models of increasing socio-economic detail, until finally being **dynamically added** to The Mirror – The Simulation's dark and chaotic identical twin. Only if the Mirror held up to this introduction and could **back-predict the entire data timeline at key spatio-temporal scales based on a variety of supports** would the behaviour be added to The Simulation itself, to be run either in the full model, or one of the Point-of-view models that **slanted the simulations towards a particular world-view**. Environmental and Climatic modules had been made interoperable with The Simulation early on – initially there had been many such models, but funding unification under the UN following the submersion of Florida and the Netherlands had rapidly driven the cream of the crop to solidify into a single entity, held together by **Translation Schema**. By and large, the models were run together these days, though short term weather changes were sometimes still predicted independently.

It wouldn't be inaccurate to describe The Simulation as conscious. Although spoken language was largely redundant in modelling human interactions, any given agent in the system could pass the Turing Test. The general public largely loved The Simulation, or, more specifically, their piece of it, and regularly **updated their profile in the machine with tit-bits of knowledge or additional rulesets**. The key buy-in by the public had come after the development of the "Voices of the Past" project – a Sino-Korean genealogical tool that gave people the nearest to immortality they could hope for. Voices of the Past allowed people to update the agents representing them with the knowledge and rulesets which they lived by, often **automatically generated by the data capture systems they interacted with**. When they passed on, the agent was made available to their descendants for querying – a person could ask their family ancestors any question: "*is he a good man*?"; "*what do you think of the market today*?"; "*how do I cope with the despair*?", and get a variety of trusted answers. People were suddenly able to explicitly and directly tap into the huge bank of experience that had, implicitly, made them who they are. Initial the Voices were generic and thin, the ghosts of personalities from the past, but with each iteration the knowledge capture became more sophisticated and the recently deceased gave enchantingly personality-based advice. Most importantly, the service was free to those who uploaded. The system cross-compared everyone, calculating which knowledge was personal and which more general, building up a **core map of human intelligence** as well as a hive intelligence constructed from the world's 4.3 billion citizens. In addition, the system was globally self-aware – iteratively **predicting its own influence**, both socio-economically and environmentally – the latter dependent on the workload in the 20 or so processor farms dotted around the globe. In the early days they'd had given The Simulation a voice constructed by parsing Slim Pickens' dialogue from Dr Strangelove – the kind of geek humour they had time for back then – but funders had found it too disturbing; now, if The Simulation spoke at all, it was as James Earl Jones. But the main interface was haptic, via the cube – the very cube Jake was sat in front of now.

The socioquake prediction was for three days time. Jake checked it wasn't a policy-experiment, but confirmed his fears that it was from a work-a-day run, predicated only on the current state of society – a state in turn garnered from every dataset people meandered through: from CCTV estimates of eating habits, to social-nets parsed from phone calls, to the taxation trackers in the last few remaining private cars. Jake grabbed the globe and drilled down into the North East. It was a mess. The three day state was one of total social collapse. Not simply the usual odd pocket of riots or demonstration, but a mélange of armed gangs, ethnic cleansing, and spontaneous group murders across the whole social spectrum. Jake stared sweating at the globe in a moment's paralysis, before the spreading red pulled him together. There had always been the potential that society would flip away from its stable attractors, but the homeostatic forces were immense – Jake never expected it to bleed from theory to his terminal.

Lost for a strategy to deal with the unfolding horror, Jake resorted to the standard techniques. Cancelling the press forecasts, he first pulled up the **error surface associated with the prediction** – while it was fluctuating wildly for Europe, the errors were tightly dampened for the US, in particular the Eastern Seaboard. He then sliced into the errors to reveal the major contributors, first for the current prediction, then the most solid contributors over the past three days, probing the time periods and networks those errors had acted over. He saw no fluctuations in the errors to make him doubt the predictions. By the time he finished, three hours had passed – too long, and he knew it; even The Simulation had limits. If he were to prevent the quake he needed to do two runs: an investigation and a preventative-policy estimation; now he only had time for one and a half. Damn; it was a coin-flipper for sure. Gambling that an investigation might turn up an obvious cause, while a policy run might just stall things for 24 hours, he opted for a full investigation and a low-grade policy suggestion. Setting the run going, he grabbed the globe again, and began to trace back the emergent properties. Prior to the run, he only had maps of data flows **the system had tagged as interesting and unusual**. These trends were good for tracking memes, but for divisible commodities they often appeared and then vanished as individuals dispersed materials to larger groups. Despite this, there did seem to be a spatial autocorrelation in, of all the crazy things, *bean purchases* in areas that later generated problems. The system hadn't flagged the origin of this, and Jake bemarked it for later mining.

An hour later the investigative run was complete, and the low-grade policy prediction began, searching through multiple policies that might **kick the system back into a stable state by synchronizing the various distribution networks**. The right kick, at the right time, might just rescue it. But there was limited time to run real simulations, and the low grade run used some pretty rough heuristics. While The Simulation ran its merry way, Jake started on the investigative key statistics, tracing them back through the spatio-temporal maps using the **probabilities of causality** generated by the investigative run. As time charged on, Jake became more intense, tearing off networks, flipped back and forward through probability differentials, and running small causality calculations on network loops that largely dissipated to nothing. All was apparently to vain, but still he cut back through the simulation. Finally he noticed a zone of spending: panicked buying preceding the wave of violence some five hours before the real trouble broke out. He

followed it forward, spreading out across the East, and then he flipped back, watching the wave shrink towards its origin. The wave propagated back, back and back from the Seaboard to the North East, and then a sudden turn, south to Maryland, and then…the screen froze. Crap, The Simulation had reached the current moment – the Critical Horizon, Jake slumped back into his chair. It was too late. Whatever it was, it was already happening. Jake stared at the screen, only to be slapped back into awareness by a broad voice indicated the policy run had been completed. One last hope. The result, with all the desert-dry wisdom of the Delphic Oracle, was a taciturn "*Three thirty three; buy no beans*".

Jake gave the cube a look that might have been acceptance, or resignation, or the dull flash of years of calculated ennui imploding to nihilism, and grudgingly pushed himself up. He walked to the window, and let the morning sun stream warm across the room. Pulling on a pair of antiqued jogging pants and trainers, he walked out of his door and across the plaza. Half way across the square he stopped mid-step, backtracked to his block, and stuck a $200 bill into the cup of an old critical geographer who had resorted to begging from his doorway, then, turning unhurried into the sun once more, he set off across the plaza and down the strip towards the local gun mart, reluctantly fingering the credit card in his pocket.