

## Merging me, myself and I

*I woke up. Sunlight, a comfortable leather sofa overlooking a roof garden. The Eiffel tower in the distance. Noise from children playing on a nearby schoolyard. I was in TransCortical's default simulspace on Carsac; the merge had taken place.*

*"How do you feel. Mrs Kertész?" a gentleman in tweed asked from the shadow of a potted orange tree. "Could you please recount how you got here?"*

*I remembered going to TransCortical from my workspace at Palomar Terminal. Before that I had had breakfast at the nice little café on Rantzausgade, just next to the slow methanefall... no, that was my other fork, the one from Titan. She had egocasted out from Titan after going to the sleeveshop on Gammeltove. Before that she had been in the bank hangar, receiving the cryptocoins... no, that was last month. This month she – I! – had been at OTPMini... except that I just recalled it as a half-remembered dream involving someone else.*

*The TransCortical gentleman clearly saw my confusion and anguish even before I began to curse. He was surreptitiously checking hidden displays that showed my mnemonic state. "I am so sorry, it appears that we had a bad engram binding, Mrs Kertész... Quite an extensive one. System: 'Lethe, try try again'."*

*I was about to ask him for what he meant (and for a refund) when the garden and me blinked out of existence.*

*I woke up. Sunlight, a comfortable leather sofa overlooking a roof garden. The Eiffel tower in the distance. Noise from children playing on a nearby schoolyard. I was in TransCortical's default simulspace on Carsac; the merge had taken place.*

*"How do you feel. Mrs Kertész?" a gentleman in tweed asked from the shadow of a potted orange tree. "Could you please recount how you got here?"*

*I remembered going to TransCortical from my workspace at Palomar Terminal. Before that I had had breakfast at the fabshop in Monakow cylinder, and before that I had been at home with Tina and 9. Except that I also remembered had a final croissant at a nice little café on Rantzausgade, just next to the slow methanefall. I had taken the commute tramway to the city centre for my egocast, enjoying the sights. Two sets of memories, two lives briefly running in parallel until they merged here on the roof.*

*The TransCortical gentleman ran his tests and nodded contentedly to my responses. "Happy customers is what we are about, Mrs Kertész."*

Merging is one of many technologies transhumans take for granted, but underlying that everyday reconnecting with forks sent on errands lies an amazing amount of cognotechnology. To construct an ego sharing the memories and subjective continuity of two similar but slightly unlike egos is by no means simple.

### **Merging technology**

If the corresponding synapses of two otherwise identical brains have both been potentiated or remain unpotentiated, guessing what the merged synapse ought to be is trivial. But what if one is potentiated while the other not? Or if changes in the connectivity of the neural network has changed the very meaning (or existence) of the synapse? The merge process has to figure out how to modify the low-level neural pattern so that the high-level pattern of memories makes sense. This is done by a process of averaging, pattern-matching and reconciling that can become arbitrarily complex: the full merging problem is equivalent to understanding both egos completely and composing a new one sharing all relevant properties. This is of

course far beyond any transhuman cognotechnology, but crude approximations are surprisingly often effective. Many merge systems make use of a pre-fork ego recording to detect differences that have appeared in the egos being merged: this is why most everyday merges can be fast and reliable. Various heuristics have been developed for memory precedence, coincidence detection and even ways of remapping conflicting memories onto “free” neural networks.

Human memory is imperfect, redundant and self-repairing, so the approximations often work well enough. Still, conflicts often appear between particular memories: not just occasional memory losses where one ego’s memory have been weakened, but odd source memory effects where who or in what context something was experienced get confused, paramnesias where memories merge into surreal combinations and even entirely spurious false memories crop up. People who merge too much will soon have an autobiographical past that appears more than a little surreal.

In principle the people or AI doing the merging could try several variants and select the best one. But it is usually not possible to understand how well a merge worked without running the new ego and interacting with it: these variant egos would have to be conscious during testing. At least by inner system law, if an ego functions well enough it is a full rights-holder and cannot be deleted, so unless the ego completely crashes when started it has to be retained. This limitation has been placed in all merging software, preventing it from doing more than one merge of two particular forks. However, that doesn’t stop some private egocasting or psychosurgery services from surreptitiously making a few test merges and saving the “best” – usually without telling the happy customer.

Extreme merging activity, or enough truly bad merges, can cause Merging Paramnesia where the sense of temporal order and personal identity of the past becomes completely dissolved. Any strange combination of memories is possible, and there is no sense that one past is more real than any other – despite some of them being obviously fictional. Sufferers are essentially confabulating their past, making it up as they go along to suit the situation.

Another condition is “Merging PTSD” (properly called MIAD, Merging induced Attractor Disorder) where several overlapping similar memories form a very strong “supermemory” that causes flashbacks, obsessive thoughts (it is hard not to think about it) or delusions. The supermemory does not have to be emotionally charged or stressful, but it often is – even when the content seems neutral (one sufferer experienced his daily commute whenever he saw a wheel, experiencing a terrible feeling of dread and anxiety whenever the 35 minute commute began to play back).

## **Supermerging**

*“Give up your selfishness, and you shall find peace; like water mingling with water, you shall merge in absorption.”*

*Sri Guru Granth Sahib*

There are limitations to normal merging. It only works for egos that can be clearly mapped onto each other: two different people, or even highly divergent forks will stop standard merging software. That doesn’t stop more radical – that is experimental, illegal or hacked – software from attempting the impossible.

Merging betas and gammas is not too hard: they are subsets of the original ego and as long as the software knows this the major discrepancies can be handled. Merging delta forks is inadvisable but sometimes doable.

To merge two different minds requires large computing resources. The software must find a way of translating the “languages” of the two different neural networks into each other in order to merge the memories and their associations together. Worse, this has to be done not just for the memories in association cortex but also \*at least\* perceptual systems, motor programs and emotional pathways. The results tend to be less than impressive: a successful supermerge often produces an ego with noticeably multiple

personalities – from one moment to another it might view and think as one or another of the original egos, rather than some unified person. Bizarre memory problems, hallucinations, delusions and sudden emotional jumps are the rule – and that is among the successful merges.

Despite these obstacles there is much interest in developing supermerge methods. The main interest from Cognite and others is not to blend people – there is not much money or rep in that – but to be able to merge skillsets. Current skillsofts are based on copying a large number of neural networks of egos with a particular skill, find the underlying skeleton and then integrate it with recipient brains through skillware. With better merging it might be possible to truly transfer high-quality skills, radically improving the power of skillsofts. Should anybody succeed well enough the economic consequences will be enormous.

Some people think a proper supermerge system could bring about not just perfect understanding of other people, but raise transhumans to a higher state. The Prakasita Atma school of techno-tantrism teaches that by merging minds it will become possible to construct manifestations of divine consciousness within the physical universe. Some members are reputed to experiment with “sublimation enhancements” at Guru Xi’s enlightenment retreat on 34 Circe.

### **Adventure possibilities**

Firewall (and many other groups) wants to keep close tabs on any supermerging technology – it has potentially enormous consequences if it is perfected. The usual suspects such as Cognite, Exotech and Sander & Avando GmbH are of course going at it full tilt, but then there are groups like the Ultimates, Guru Xi, the Phaetonites and the Entelechy Network (suspected exhumans on Extropia) who are doing their little projects. Sentinels might be sent to infiltrate projects, get research data and then wreck things if they look too close to a breakthrough.

An apparently supermerged individual shows up: perhaps a bit mentally unstable, but nevertheless that ego seems to actually have all the knowledge, memories and skills of several people. It is a skilled techie, deadly spy, elegant marketer and great cook at the same time, able to converse in 10 languages and equally at home among Barsoomian rebels and hypercorp bureaucrats. What is actually going on? Has somebody succeeded in proper supermerging, and why would they let a test subject go off on their own? Maybe it is a trap to see who sends agents? Is this composite character actually a TITAN construct, supermerged by the alien machines in order to create a very capable infiltrator? Or is it an elaborate prank or case of multiple personality disorder – a sufficiently good actor (with muse support) able to convince people that they are capable of everything?

### **Banyan lifestyle**

“Banyan lifestyle” consists of using multiple forks to live several parallel lives that are occasionally pairwise merged together to keep the collective self together. Typically egocasts are sent at regular intervals for merging.

Maintaining a large number of parallel forks is a tricky logistic problem, especially if some are remote and it is costly to egocast forks there. A common solution is the minimal spanning tree: the forks are organised in a cost-minimizing tree structure and update each other at regular intervals. This both minimizes the number of merges needed and the total cost of transmission, at the price that memories from remote forks will take a long while to reach a fork out on a limb.

Among most transhumans Banyan is regarded as more than a little odd. Maybe cutting-edge in terms of existential hacking, but pushing the boundary of the sane. Still, not long ago beta forks (and before that, forking itself) were regarded as controversial: Banyans think they have are the future.

### **Mr/Dr/Professor Terry Ramirez**

Terry Ramirez can be found at nearly every major university in the solar system. He might be part of the faculty, a student or even a lab technician, he might be calling himself Terence, Tera, Tel, Thierry or even

Theodoric, but he is there. An early and avid exponent of Banyanism, he has learned to keep quiet about his multiple existences –since some universities dislike having him teach at competing universities (and those pesky legal details about having several alphas).

Friends and colleagues know him as a friendly, enthusiastic academic who seem to be interested in nearly any subject. He can quote the most amazing trivia and data, be it the peculiarities of pre-fall Indian XP production to the xenobiology of Europa to the political views of obscure autonomist splinter groups. He is an Argonaut's Argonaut, always promoting learning and technological liberation. As well as whatever other causes that catches his interest here, this week.

Although he doesn't like to talk about it, he has a background as an investment banker pre-Fall. After the Fall some of his investments have borne good fruit and he can devote himself to education thanks to the interest. He is by no means rich, but well-off enough to maintain his lifestyle – maintaining his far-flung forks and preventing the wrong authorities from figuring things out takes a bit of effort.

Friends worry that Terry's lifestyle is not mentally healthy; he does seem to have more than the usual number of quirks for an absentminded professor. Terry thinks he has the situation under control – he has some black market psychotherapy contacts that maintains his mental equilibrium.

Terry has several friends who are Firewall agents but is not a member and likely unaware of the organisation. An evaluation has concluded that while he is knowledgeable and would likely be a strong supporter, he is a bit too unreliable to be a good agent. Since any sensitive knowledge would also be replicated among many garrulous and widely dispersed instances, he would also be a security risk.

### **Adventure possibilities**

Firewall agents might encounter Terry on a mission, and later be surprised when they are recognized somewhere else by another Terry. He might be both helpful, a foil or a security risk.

If a PC is a friend of Terry (or need some help from the widespread academic) they might be contacted to help him – some authorities have connected the dots and want to stop his forking. While his outer system forks are fine, he doesn't want his investments seized and his alphas indicted for identity fraud. Can the PCs get him out of the jam?

Terry has found out something dangerous: a major Firewall operation, an easy recipe for a nanovirus, the whereabouts of a TITAN WMD. The PCs (or their enemies) are sent to try to stop the information from spreading from Terry to Terry. As the Terrys notice "accidents" starting to happen to themselves, he will start countermeasures.

### **Copyrations**

Copyrations are corporations composed only (or mostly) of forks of the same person. While Pax Familiae may be the most widely known, most are entirely legal. Unlike Banyan, this is forking and merging done for commercial reasons.

### **Mr Lee Tzu Chuan**

Mr Lee runs Xing Partners, a law firm staffed almost completely by forks of himself.

Before the Fall Tzu Chuan was a fairly ordinary attorney working for the Singapore firm Haq & Tay. After the Fall he found himself an infugee. He had saleable skills and a determined work ethic, but he also recognized that he was by no means alone in this. Rather than just accept indenture or becoming an online sarariman for some hypercorp he decided to undercut the competition.

Xing Partners is composed of a number of "partner forks" of Mr Lee, located at the offices on Mars, Luna, Venus and Extropia. These forks are merged at a regular rate to keep them synched. When needed these are

further forked to do legal tasks depending on workload and client needs. If needed the firm can call up enormous number of forks, neatly avoiding the cost of educating, hiring and validating new partners (who also work nearly for free!). Clients usually have at least one dedicated fork helping them, and quite often this fork in turn forks behind the scenes to prepare material, draft texts and meet with people. Afterwards the client service forks are merged into one of the partner forks. Some deft legal trickery makes the partner and client forks appear legally to be betas.

Like many legal firms Xing Partners work on retainer basis for a number of major corporations. Since the company can always guarantee that there will be someone to provide service and has a very consistent quality, they are popular. For individual cases a standard tariff is used, modified by the estimated complexity of the case – the number of Lee-hours behind the scenes that are actually used does not necessarily correlate strongly. There is also a significant amount of pro bono work: Mr Lee recognizes the benefit of good deeds and good marketing.

In some cases client forks are deleted (being a practising Buddhist and cost-conscious Mr Lee does not care too much, as long as the main partner forks are safe). The option of getting an attorney who can overhear a sensitive discussion, give advice and then be perfectly relied upon not to reveal the information is something some people are willing to pay extra for. While Mr Lee does not accept doing anything illegal in any habitat he is active, he certainly has few scruples against taking on shady or paranoid clients.

Xing Partners is not an expensive, high status firm. It aims at the profitable middle of the legal market, specialising in civil litigation and commercial law. Mr Lee is also by no means the best attorney in any of these fields, but since his firm is able to keep competitive prices it is doing well. The profits are shared among the partner forks, which makes sure they are strongly motivated to work hard for the firm so that their forks will also be.

Other legal firms have been critical of the practice, but it is hard to beat economically. More and more consultancies are approaching the copyration model. As one of the successful cases, Xing Partners has a profitable side activity in consulting about copyration HR management. The firm has also supported political candidates that speak out against indenture and limitations on personal forking.

As a person, Mr Lee is fairly conventional and private. He enjoys stability, having solid investments, fine dining, watching cricket and playing badminton. He has mildly hypercapitalist views and supports a few Buddhist charities.

### **Adventure possibilities**

Firewall agents sometimes need an attorney, and Mr Lee is not an implausible choice if they are involved in litigation. They might hire him, or even get him assigned pro bono for a case – especially if it has some importance for keeping personal forking free.

Firewall crows have analysed likely economic futures, and they are worried about copyrations. They are competitive, relatively easy to set up, multiply human capital like crazy – and push towards a global economy consisting of billions of forks of the most copied people, working for peanuts while being vulnerable to memes and neuroviruses, and growing rapidly towards a posthuman state with no room for individuality, consciousness or human values. They want to stop copyrations. One way would be to try to discredit them: strike at prominent copyrations like Pax Familia and Xing Partners, demonstrating that this practice produce dangerous mental, economical and legal instabilities. The PCs are sent to try to undermine a copyration so that its fall will discourage anybody from following it.

## **Traits**

### **Positive traits**

#### **Easily Merged (10 CP)**

Due to a quirk of neuroscience or lifestyle (yes, some people do have boring lives), forks of the person are somewhat easier to merge than normal. While some claim they can train this trait by multiple merging, it has more to do with memories being laid down and accessed in patterns that “add” relatively well, or an outlook on life that has no problem with multiple pasts. Add a +20 modifier to the psychosurgery test.

### **Negative Traits**

#### **Rapid divergence (10 CP)**

Due to a quirk of neuroscience or lifestyle, forks tend to diverge faster than on average. When merged, use the next level of time apart (e.g. for a 1 day separation, roll as if it was a 3 days-1 week separation). People with rapid divergence are often concerned that their forks tend to develop a “will of their own” (which is of course just a projection of their own wilfulness).

#### **Merging Paramnesia (20 CP)**

*“The Venus mission? I remember going to it with Zeke and Informed^3. We met with the tong and got the goods, but then SJ and her goons showed up. Zeke got shot up pretty badly, I hear she was repaired on Octavia. The goods? Got lost during the fighting.”*

Due to excessive merging or bad merges, the person has a broken autobiographical memory. The sense of temporal order and personal identity of the past becomes completely dissolved. Any strange combination of memories is possible, and there is no sense that one past is more real than any other – despite some of them being obviously fictional. The person is essentially confabulating their past, making it up as they go along to suit the situation. They are not deliberately lying and might even know they are suffering from paramnesia, but they cannot tell when their memories are deceptive or not.

When trying to recall past events (beyond last merging), roll an INTx3 (or harder, if it is a small thing) test to see if they remember. If they fail, they will not notice and make up a plausible memory instead. On critical successes they will permanently learn a correct memory, while a critical failure means they consolidate an erroneous memory and will now always believe it. Any attempt to insert false memories will get a +30 modifier – but over time they run the risk of getting jumbled with other made-up memories.

#### **Fork Conflict (10 CP)**

The character has an alpha fork that has diverged and refuses to come back. Both regard themselves as the “true” or sane fork, despite having different goals. There is plenty of room for confusion, reputation damage, and legal battles. The conflict does have some advantages: blaming the “evil twin” is easy and plausible.

#### **Former Beta (20 CP)**

The character is a shadow of its original self, a beta fork that has survived and become its own person. Maybe the original was destroyed in the Fall, maybe the alpha was killed using an exceedingly subtle neurovirus that infected all backups, maybe the alpha and all copies were deleted for a crime but a beta survived. The beta has grown since then, and is no longer quite as hobbled as it was. It still suffers from a social stigma if its background is revealed: in most polities it cannot be a citizen, and almost anybody tends to assume it is just a copy, not a full person. It has mental effects similar to having edited memories and possibly modified behaviour. On the plus side, being a bit cut-down it takes less memory and processing power to run – it can squeeze into some systems and morphs a full alpha might not fit into. Characters with this trait should have few active skills above 60 and few if any aptitudes close to their limits.