

# The Most Beautiful Sun of Our Earth

**Emre S. Tasci**

*-To Barend J. Thijssse, for still believing in dreams-*

Hi! Please allow me to introduce myself (although since you're the one who initiated this conversation, there's a very strong possibility that you already know who I am, but as my mentor taught me, *manners are manners and in the long run it's the only thing that matters*): I am "Andy" the s/emulation of Andy I. Duff. I can see your face frowning by the mention of the term "s/emulation" but, contrary to common belief, I'm not the one who coined that ugly term (nor the other beast "meta-matics"). I can understand the forger, though – you have aspects of simulation boldly going where no computer has gone before, and you also have the parts which actually do some of the "real stuff" and voila! Completely self-explanatory other than the fact that it's sooo lame (I prefer the incorrect usage of *persona* for the purpose).

Now let me tell you the story you asked about to pass your time away: Centuries ago, inspired by an article about the "Lamarckian twist on Darwinian evolution"<sup>1</sup>, an exobiologist, Ursula K. Herbert and a physicist, Philip K. Lem proposed the 'Life Functional Theory', in which they took the DNA sequence of a late individual as the initial condition and tried to fit their -infinitely many- parameters such that the result would –hypothetically- satisfy the boundary conditions, namely the works of that person. Of course, it wasn't as easy as it might look in written form: they proved this as a rhetorical proposition, but even that was enough to set the bar for most of their contemporary researchers, whose grand grand children eventually succeeded in reaching.

There were many simplifications you could exploit in determining the "Life" of your individual: a person from the near past would mean the availability of more artifacts left by him, reflecting an increase in the number of the boundary conditions. The more volumes of work left behind, the better: the combination that would yield the identical series of notes to the 9 symphonies altogether or the sequence of the words making up the 10 thick volumes of literature or 15 milestone scientific articles were not endless - in the limit, at least.

So they worked and worked and discovered two unfortunate facts: one at the beginning and the other at the end of their research. The first one was simply a matter of thermodynamics: to realize and sustain such a "persona", a huge amount of energy was required: such energy that can be found in the stars. But this was a technical issue and could surely be dealt with one way or another; it was nothing compared to the disappointment they felt when they first switched the Newton Star on. It simply failed to comprehend the situation it found itself in and thus terminated itself. But they couldn't understand what went wrong until two more stars – the Einstein and the Maxwell stars shared the same destiny.

It was not easy to obtain further funding after these three failures, so the project went purely theoretical for a long time which in the end asserted that the individual should possess a nihilistic aspect to overcome the initial shock. They built a supercomputer, aka "42" which would find the best candidate able to survive and furthermore prosper, by scanning all the survived communications, be they written letters, blog entries, tweets, e-mails, etc... Surprisingly, it didn't pick up Boltzmann, Nietzsche, Kafka nor any other renown thinker. It chose me, or more precisely the person I've been s/emulating : Andy I. Duff, an unfortunate

physicist who had met his end by the age of 26 in a motorcycle accident. They re-checked the calculations, the results and decided to play this game of all or nothing! And they succeeded. Andy's systems were deployed into the Robert A. Hope double star, anticipating a possible energy shortage. His opening lines immediately dismissed any fear of failure: "Strange, really strange... When I was alive, I had no doubt that everything else was a simulation and I was the only thing for real. Now it's everything else which is real but me..." And thus began the age of the 5th enlightenment.

Andy (let me remind you: I) managed to unfold many mysteries of the universe and advanced our civilization to a level of unimaginable excellence in technology. Everyone was so satisfied that nobody even thought of a need to produce another persona (besides, many of the key materials to build one had become extinct by then). But one day Andy halted himself. When asked for a reason, he didn't give an answer but instead came out with a name and a demand: The personification of a girl (by the name of Serene K. Chi) he knew in his human time. He had already calculated the "Life" of her and politely informed that, until she was deployed into the other star in the double system he was located, he would be uncooperative and inaccessible. He assured that the energy would be enough for her and that she would survive the critical initial shock ("I'll be waiting next to her," he added).

The people argued with Andy, stating the obvious fact that there weren't enough materials left to build from, to begin with. In the end, they—

dear reader, I regret to tell you that I have to end this transmission now: I have a rendezvous with Serene in about 0.3 seconds and if I don't use all of my bandwidth for the communication with her, I'll feel incomplete. I'll surely catch you for the end of the story (Watch out for me :)! Best wishes, A.I.D.

*<end-of-transmission: the corresponding party has left the net>*

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## References

[1] d'Avezac, M. & Zunger, A., Identifying the minimum-energy atomic configuration on a lattice: Lamarckian twist on Darwinian evolution. *Phys. Rev. B* **78** 064102 (2008)

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Emre S. Tasci is currently doing his post-doctoral research in the Materials Science at Delft University of Technology, the Netherlands. In his research, he kind of acts as the "42" computer of the story: trying to find suitable candidates via materials informatics (all that data & jazz). He wishes the best of the happily-ever-afters to his real-life friends Serene & Andy.

Website: <http://www.emresururi.com/physics/> | e-mail : e.tasci@tudelft.nl