at the doorsill

Ryszard Павел Kostecki



彼岸の半ば 2020 名古屋大学

«We barely remember what came before This precious moment, Choosing to be here right now. Hold on, stay inside...»

- James H. Keenan, Parabol

20 YEARS LATER

«Life is an art, and like perfect art it should be self-forgetting»
— 鈴木 大拙 貞太郎, 1917, Illogical Zen

It was a snowy February, four months before leaving the microheaven of secondary school, when I have put out a website with some of my programs, midi music, and poems, probably as a compromise between introvert and extrovert tendencies. And since then it became a drawer and an anchor, where I have been dropping out most of the things I have created, without much care about the further outreach, as intimacy and sales do not commute. Twenty years later, it is interesting for myself to see where, and how, my own life and the stuff produced over the way, went through. The changes of reference frames of meanings and peers, involvements and departures, physical and metaphysical trips, have been slowly sedimenting. Various tools and languages, ideas and styles, have been picked up and entangled on the way, out of curiosity, passion, naïvety... A backdoor art workshop, for the sake of definiteness and other reasons, was put into academic frames. In the meantime mankind has switched from life to smartphones, from the end of history to the end of climate, and so on. Ability of prolonged focus decreased, many have deceased, here and now are still unknown, while screen remained just a curtain. Ars longa...

27.II.2020, 名古屋

DARKNESS AND MOULD

«ἔδωκαν αὐτῷ πιεῖν ὅξος μετὰ χολῆς μεμιγμένον καὶ γευσάμενος οὐκ ἤθελεν πιεῖν» — Mατθ. 27:34

In the mass grave of dreams, my yet alive lips Taste mould and vinegar at the treat of defeat. Feasting fragmented remains of a bygone life, The unfulfilled cravings, and the darkness of night.

Whatever has been booked in those volumes around me, The flight has never reached its imaginary destiny. And whatever else has not been, there is no return of the fee, So I search how to unfreeze this, what still has a chance to be. As for the river I've cried in despair at this wall of the books of the dead, Let it reach the other side, let it bring seeds to spring, if any of them are left. As for the irreversible time arrow, painful to be known by it, Let it keep me aware of the shadows that every light has to bring.

21.III.19 (彼岸の半ば), Książąt Pomorskich 5/7/13, Sopot

ABOUT THESE GRAPHICS

The majority of these graphics is made from photos, subjected to post-processing via various transformations. The main intention of processing is to uncover some 'deeper' content (both semantic and structural) of the graphics, when the rudimentary 'realistic' content of the photo ceases completely or sufficiently strongly, so that the pulsation of the noise (always raising from the original photo) becomes a semiotically potent factor itself, corresponding to 'dynamical' aspects of perception that form a part of alive experience of the viewing process, but are lost in the 'static representation'. This noise becomes, in turn, a substrate for painting on a digital canvas, with tonality, colours, and shape patterns expressing various 'transitionary' aesthetic experiences and mental states. (One of the original, and thus rare, effects, used especially in the «Abstractions»^[1] and «Wilder Wein»^[2] cycles, is based on processing a binary .jpg file with an initial photo through a converter of Polish 8-bit ASCII codepages.) With time I have started to put more and more emphasis on using complete crops of photos as globally defined layers (or, eventually, distinct parts) of the image, so that the local structures of the resulting graphics would have in principle larger inter-local cohesiveness. In «Spiritual transformations»^[3] cycle this constraint has helped to increase the integrity of formal substance and semiotic essence (reflections of light, literally and figuratively, from experiential usamadhis). The short collection of the covers of «Imaginary albums»^[4] has more humoresque character, yet check out the (literal and metaphorical) layers of «The Lwów Volta»^[5].

III.2019, Sopot

^[1] https://www.fuw.edu.pl/~kostecki/abstractions

^[2] https://www.fuw.edu.pl/~kostecki/abstractions/wilder_wein/wilder_wein_1.htm

^[3] https://www.fuw.edu.pl/~kostecki/spiritual_transformations, https://www.fuw.edu.pl/~kostecki/spiritual_transformations_2, https://www.fuw.edu.pl/~kostecki/spiritual_transformations_v

^[4] https://www.fuw.edu.pl/~kostecki/gfx

^[5] https://www.fuw.edu.pl/~kostecki/gfx/tlv-tdep_700.jpg

SEMIOTIC DEFENCE SHIELD

...without thinking for too long, Nox pulled out the semiotic defence shield from behind his bosom, and set himself up for maximum resistance to alternative cognitive models. Streams of data attempting to break his prior were twitching like flexible snakes. He, however, stood steadfastly against the facts of the hostile world-pictures. He did not try to contradict or to show inconsistencies in terms of projections onto his logic. He knew how double-edged the sword of gnoseological deconstruction could be. A picture of his fallen comrades flashed before his eyes. They were trying to convince the enemy of their reasons in the direct fight of dialectics. He has already seen too much to allow any deviations from the model. When the enemy stopped firing the germs of doubt for a moment, without hesitation Nox punched him with a fist straight into the stupid snout.

27.VII.2012, Warszawa; translated 13.XII.2018, Sopot

TEMPUS FUNGIT

Астралиночке

Наша жизнь – так короткая, судьба это бл...дь: Не успеешь проснуться – время уже умирать; Не успеешь полюбить себя – уже родные ушли; Когда наконец повзрослеешь – прошлые дни не твои.

Сколько лет проводим мы в мучении и во тьме, В суетных изобретениях, больные на уме, Пока не распутаем клубок – а в нём нет ничего, – Только лагерь построен нами – и ребёнок, пленник его.

Но нет конца песням, хотя есть конец музыкантам; Зачем грустить если мир для всех одинаково странный? Если успеешь удивиться, засмеяться, поклониться — Будет приятнее в землю телом погрузиться.

Тебе выбирать молитвы и интерпретации ответов, Вся власть в руках твоей же души советов. А пока ещё не смущайся, никто не знает дороги, Тебе выбирать стихии – спокойствия или тревоги.

Сопот, 18.11.18 — к 30-летию полёта комплекса МКС 1К11К25 «Энергия—Буран»

PHILO (THE UNBEARABLE ITCHINESS OF NOW)

for Peter F.

There's no "here" – there is always a locus of focus – (Although sectarians would drag you into some hocus pocus)
The choice is always made by you, the child who has dreams –
If you are in the water, how often do you change the streams of schemes?

How often do you change the game, beyond the narratives and judgments?

How often do you let your body strive for something beyond old motives and patterns?

How often do you spiff the floor lick the plant, destroy a thing, scream and

How often do you sniff the floor, lick the plant, destroy a thing, scream and jump without treason,

Follow the beetle, make pointless sounds and moves,... – shifting seasons for no reason?

Beyond the necessity of being something specific, there is never nothing, There is just something unnamed, that you choose to do – faster than the mind is tracking,

There is a permanent change, the thousand-petaled pathway of void, The permanent change that you embody as "it" – and it never stops.

They say "calm down your mind" or "don't ever dare to move",
Obey or run away – school is a prep for life, both kill the bodily truths,
One can meditate away some things sometime, yet one still has to poo,
And so "here" you always meet "it" (some sort of loo) – the form acting through
"you".

They say "ego is an enemy", but what if it is just a boundary – A place for adulthood to keep aliveness, while non-harming? Within the self-chosen bounds you swipe the channels of being, Outside there's myth-crafting with those whom you like seeing.

Who then is this witness, if he does not attend the pure silence? Sober artisan sailing the acid of each second that happens, Keeping the wheel of balance between the wilderness and a kind bow, His name is Friendship with the unbearable It-qì-ness of Now.

INTER-UNIVERSAL SAMURAI (宇宙際侍)

for my friends of «marée montante»

T.

It has been leaked [1, 2] that Scholze (in collaboration with Stix) is working on verifying Mochizuki's inter-universal Teichmüller theory. In the course of this work, and some time after personally visiting Mochizuki in Japan, Scholze finds some critical missing element in Mochizuki's proof and kindly sends the preprint to Mochizuki before releasing it. Mochizuki kindly welcomes the draft, asks for some time, and eventually produces a further long update of his work, sending it back to Scholze, together with a kind email. Scholze kindly asks for some time, and eventually kindly replies to Mochizuki that in the newest version of the argument there is another mistake, points it out, attaching an updated version of his manuscript. Mochizuki kindly welcomes it, asks for some more time, and eventually sends one more manuscript to Scholze. Kind exchange of emails follows, and after some work Scholze again sends an email, stating that he found a mistake, kindly points it out to Mochizuki, with a new version of a draft attached. Situation repeats again, and at the end of the next loop Mochizuki kindly asks Scholze if, instead entering further iteration of the loop, he would be kind to welcome a student of Mochizuki, Mr. Shisūji Nokami, who is well educated in the inter-universal theory, including most recent Mochizuki's error corrections, and the reasoning that is behind it. Traditionally to Mochizuki [3], his email contains an exact specification of the amount of hours Mr. Shisūji spent completely dedicated to studying the theory, as well as an exact counting of how many times he has read through the particular manuscripts, including Scholze's work. Scholze kindly agrees to welcome and talk with the visiting student. After some time Mr. Shisūji arrives to Bonn. On the next day after arrival, Scholze meets with Shisūji at Department of Mathematics. Shisūji is very kind and intelligent. He says that it is his first time in life he left Japan, and he shares his impressions how different are so many things in Bonn, as compared with Kyōto. After taking a coffee from department's canteen, they go to some empty classroom, to discuss the current state of art in the inter-universal Teichmüller theory. When the door closes, and they both come to the blackboard, Shisūji says "it was my uttermost honour to meet you, Scholze-san", and kindly pulls the detonator.

^[1] Fesenko I., 2018, Remarks on Aspects of Modern Pioneering Mathematical Research, https://www.maths.nottingham.ac.uk/personal/ibf/rapm.pdf.

^[2] Woit P., 2018, abc News, https://www.math.columbia.edu/~woit/wordpress/?p=10436.

^[3] Mochizuki S., 2014, On the verification of inter-universal Teichmüller theory: a progress report (as of December 2014), http://www.kurims.kyoto-u.ac.jp/~motizuki/IUTeich%20Verification%20Report%202014-12.pdf.

ps. According to Marcin Kotowski (private communication, August 2018): «the detonator was not Mochizuki's idea, it was Shisūji's. He too came to believe there is a fatal mistake in the proof and decided to save the honor of his master.»

H

*Funny synchronicity: This piece of math science fiction was written and emailed to a few mathematician friends of mine several hours before an announcement, at International Congress of Mathematicians, that Peter Scholze (together with Caucher Birkar, Alessi Fegalli, and Akshay Venkatesh) is awarded with 2018 Fields Medal [4], without me even knowing that the Congress is happening at the same time. (From reading Peter Woit's blog, I knew that Scholze is considered as a candidate for this year's price, yet without the knowledge of timing of ICM.)

[4] IMPA (anonymously), 2018, Researchers from Germany, India, Iran and Italy take home the 2018 Fields Medal, https://impa.br/en_US/page-noticias/researchers-from-germany-india-iran-and-italy-take-home-the-2018-fields-medal/.

III.

ps.2. [The following text is a follow-up to my comment on Peter Woit's blog, posted after public release of the Scholze–Stix paper and Mochizuki's commentaries. This follow-up, unlike the original comment, was not accepted by Peter, due to the reasons unknown to me (for example, it could be too long or too much offtopic).]

To avoid misinterpretation, I want to add that by bringing up the perspective of cultural anthropology, I wasn't intending any deconstruction (there is already enough flavour of the nominalistic reductionist attitude in the Scholze–Stix paper). In the same sense, by being satirical in the above fictional story I was not intending to be sarcastic or ironic. Quite oppositely, it seems to me that Mochizuki dreams out a big dream, and while he may or may not be able to turn it into a technically sound exact result (by means of the default professional standards), the scale and dedication of his efforts are remarkable on their own.

In a wider perspective, maybe the dramatic story of inter-universal Teichmüller theory should be taken as one of the indications how the Grothendieck-style holistic approach to mathematics can be powerful but also elusive, prone to shifting from a fairly-tale to swamps, not only due to richness and complexity of the higher order categorical generalisations of various objects, but also due to easiness of speculative weakenings of diagrams 'up to a fleeting sense of higher taste', which may carry even the wealthiest minds into the no man's land. For

example, Serre's commentary in 1986 letter to Grothendieck: «I particularly remember the rather disastrous state of SGA 5, where the authors got lost in masses of diagrams whose commutativity they were reduced to asserting without proof (up to sign, with a little optimism...); and these commutations were essential for the sequel» [5] sounds strikingly similar, both in the content and context, to the Scholze–Stix commentary «[Mochizuki] claimed that up to the "blurring" given by certain indeterminacies the diagram does commute» [6].

The cultural differences may prevent someone to effectively communicate a valid *project* in a way that would be inviting enough so the critical mass of others would join in. E.g., Grothendieck knew how to do it by formulating standard conjectures, which eventually have lead to Deligne's proof of Weyl's riemannian conjecture. While Deligne didn't rely on standard conjectures, nevertheless Grothendieck, by communicating his project in a way meaningful for Deligne (who was his student and had taken the innovative approach), is recognised as a person who essentially contributed to solving this problem. What if Mochizuki is strongly communicating his belief in reasonability of the project he got involved in, but lacks some sort of ability to form sufficiently sound 'inter-universal standard conjectures', and so he recourses to another (anecdotal, yet mind-boggling) forms of persuading the coherence of meaning he sees? After all, why he would even bother himself to put the Scholze–Stix paper on his own website? I referred to 'samurai ethics' because of the very specific aesthetic style Mochizuki himself chooses to communicate and stress the meaningfulness of the *project* he offers.

In this context, I'd like to recall the case of Minoru Tomita. His research into the structure of the standard forms of von Neumann algebras was a key breakthrough in the field, comparable (in the degree of revolutionary impact it brought) with the founding research by von Neumann and Murray. In particular, it has allowed classification of type III von Neumann algebras [7], the development of full-fledged theory of noncommutative integration [8, 9], as well as several deep results in mathematical physics (e.g. the Bisognano-Wichmann theorem [10] on emergence of space-time structure from the operator algebra of quantum fields, and the exact derivation of Hawking's temperature formula based on relationship between modular automorphisms and the Kubo-Martin-Schwinger states [11, 12]). However, the original results presented by Tomita were technically flawed and became heavily criticised. It is very unclear what was Tomita's own attitude to these mistakes. Only due to the further work by Masamichi Takesaki (by that time already a well-recognised researcher in the field of operator algebras), resulting in his book "Tomita's theory of modular Hilbert algebras and its applications" [13], published three years later, the theory was accepted, and is now known as the Tomita-Takesaki theory. (There exists a valuable Takesaki's historical account [14] on early reception and correction of Tomita's results, and I draw here

also upon some knowledge obtained by personal communication from other sources.) Tomita's original work [15] remained unpublished and has been completely left aside, beyond the scientific circulation. It seemed to me always very strange, almost paradoxal, that the major paper in the field, even if being involved in a large amount of technical mistakes, has received so little credit and virtually no review with a commentary (except Takesaki's book), e.g., as something like a 'golden oldie' (which is a common practice in the field of general relativity [16]), or as an appendix in some conference proceedings (due to its definite historical value). Before his "standard forms" work, Tomita had obtained several other valuable results in the same field, which were published and well-received within the cumulative time span of over a decade. Thus, his preprint definitely was not a miraculously opportune mistake of some shady individual, but a result of a longterm innovative work of a dedicated researcher. The denial of attribution of a positive value to the original breakthrough manuscript, even if taking into account the harshness of professional standards of the hard-core operator algebraic community, is noticeable on its own. Quite characteristically, the misnaming of Tomita's manuscript is perpetuated throughout all of subject's literature [17], showing clearly that this text was not only rejected in its validity, but also not seen at all by the experts. Furthermore, as opposed to his earlier works, there was practically none of later work by Tomita that would gain any noticeable impact in the field of operator algebras. This suggests a possible interpretation that the "forget Tomita's paper" effect can be a socially constructed 'losing the face' (more specifically, a reaction of a denial by the community focused on high standards of mathematical exactness, when faced with the revolutionary result provided in a form that defects these standards). The specificity of Tomita's personality quite probably contributed to this as well (I've heard a first-hand story about a «strange behaviour» of him while giving a talk at some conference – in particular, stating a specific lemma, together with a remark that he proved it many years ago but... forgot it, – which, however, makes more sense in the context of Connes' remark: «he's someone who has succeeded in avoiding all the traps that society tends to set for someone extremely original. He became deaf at the age of two. When he started his research, his thesis advisor gave him a huge book telling him, "Come back and see me once you have read this book". Tomita met accidentally his thesis advisor two years later and the latter asked him, "How is the book going?" to which Tomita replied, "Oh, I lost it after one week"» [18]). While Mochizuki's case has clear differences with respect to this story, it also shares certain stylistic similarity, which may represent some important characteristics of the contextual limitations of expression and communication of mathematical ideas.

To sum up these reflections: sometimes there are nontrivial issues in the crosscultural communication that are also influencing mathematics (Ramanujan's story being the clear-cut example), and maybe Mochizuki needs his own Takesaki (thus, someone who will be willing to invest essentially more than 5 days of discussion plus preparation and write-up) to make the inter-universal dreams Wick re-rotated into intersubjective realms (either as a sound proof of whatever is behind the "Corollary 3.12" or, at least, to settle some nontrivial 'inter-universal conjectures' for others to ponder upon by their own ways and dreams, hopefully ending in a real-life stream of proofs and publications). Maybe this is something that Mochizuki is communicating to us through his style, if we will take into account his (clearly manifested) confinement to specific ethics and aesthetics?

For sure, it is a quite speculative reading. In particular, positioning the analysis of Mochizuki's anomaly inside the interpolation scale between Grothendieck's and Tomita's cases may be as well just a subjective locus of view, expressing my own mathematical interests more then anything real about Mochizuki. Yet, it seems to be likely that skilled visionaries are not always skilled translators, and then it is a matter of the socially constructed context, whether and how the adequate arrangements for translation can be successfully established. It does not seem to have happened so far at the scene of the inter-universal theatre.

- [5] Colmez P., Serre J.-P. (eds.), 2004, *Grothendieck–Serre correspondence*. Bilingual edition, American Mathematical Society, Providence.
- [6] Scholze P., Stix J., 2018, Why abc is still a conjecture, http://www.kurims.kyoto-u.ac.jp/~motizuki/SS2018-08.pdf.
- [7] Takesaki M., 1979, 2003, Theory of operator algebras, Vol.1–3, Springer, Berlin.
- [8] Haagerup U., 1979, L'-spaces associated with an arbitrary von Neumann algebra, in: Algèbres d'opérateurs et leurs applications en physique mathématique (Proc. Colloques Internationaux, Marseille 20-24 juin 1977), Colloques Internationaux C.N.R.S. 274, Éditions du C.N.R.S., Paris, pp.175–184, http://dmitripavlov.org/scans/haagerup.pdf.
- [9] Falcone A.J., Takesaki M., 2001, *The non-commutative flow of weights on a von Neumann algebra*, J. Funct. Anal. **182**, 170–206,

 $http://www.math.ucla.edu/{\sim}mt/papers/QFlow-Final.tex.pdf.$

- [10] Bisognano J.J., Wichmann E.H., 1975, On the duality condition for a hermitian scalar field, J. Math. Phys. **16**, 985–1007; 1976, On the duality condition for quantum fields, J. Math. Phys. **17**, 303–321.
- [11] Sewell G.L., 1982, Quantum fields on manifolds: PCT and gravitationally induced thermal states, Ann. Phys. 141, 201–224.
- [12] Fredenhagen K., Haag R., 1990, On the derivation of Hawking radiation associated with the formation of a black hole, Commun. Math. Phys. 127, 273–284.
- [13] Takesaki M., 1970, Tomita's theory of modular Hilbert algebras and its applications, Springer, Berlin.
- [14] Takesaki M., 2014, Structure of von Neumann algebras of type III, https://www.imsc.res.in/~sunder/mtnotes.pdf.

(Particularly relevant is the following fragment: «So the theory for a von Neumann algebra of type III was badly needed when Tomita proposed his theory at the Baton Rouge Meeting in the spring of 1967. But his preprint was very poorly written and full of poor mistakes: nobady bothers to check the paper. When I wrote to Dixmier in the late spring of 1967 about the validity of Tomita's work, he responded by saying that he was unable to go beyond the third page and mentioned that it was very improtant to decide the validity of Tomita's work. At any rate, Tomita's work was largely ignored by the participants of the Baton Rouge Conference. For the promiss I made to Hugenholtz and Winnink, I started very seriously in April, 1967, after returning from the US and was able to resque all the major results: not lemmas and small propositions, many of which are either wrong or nonsense. Then I spent the academic year of 1968 through 1969 at Univ. of Pennsylvania, where R.V. Kadison, S. Sakai, J.M. Fell, E. Effros, R.T. Powers, E. Størmer and B. Vowdon were, but non of them believed Tomita's result. So I checked once more and wrote a very detailed notes which was later published as Springer Lecture Notes No.128: simplification was not an issue, but the validity of Tomita's claim. Through writing up the notes, I dicovered that Tomita's work could go much further than his claim: the modular condition, (called the KMS-condition by physicists), and a lot more. I know that the crossed product of a von Neumann algebra by the modular automorphism group is semifinite which I didn't include in the lecture notes because I thought that the semifiniteness alone was a half cocked claim. When I mentioned firmly the validity of Tomita's claim, the people at the U. of Pennsylvania decided to run an inspection seminar in which I was allowed to give only the first introductory talk, but not in subsequent seminars, which run the winter of 1969 through the spring and the validity was established at the end.»)

[15] Tomita M., 1967, *Standard forms of von Neumann algebras*, Kyūshū University, Fukuoka, https://www.fuw.edu.pl/~kostecki/scans/tomita1967.pdf.

[16] MacCallum M. (ed.), General Relativity and Gravitation Golden Oldies, https://www.springer.com/gp/livingreviews/relativity/grg-golden-oldies.

[17] The preprint [15] is misreferenced in M. Takesaki's books [13] and [7], as well as in all publications of other authors (with a single exception of [19]), as "Quasistandard von Neumann algebras", yet it is properly referenced in Tomita's paper "von Neumann 代数の標準型について" [On canonical forms of von Neumann algebras], 1967, published in: Fifth Functional Analysis Symposium of Mathematical Society of Japan, Tōhoku University, Sendai, pp.101–102.

[18] Connes A., Goldstein C., Skandalis G., 2007, *An interview with Alain Connes. Part I*, Newsletter EMS **63**, 25–31, http://alainconnes.org/docs/Inteng.pdf.

[19] Tomiyama J., 1969, On the tensor products of von Neumann algebras, Pacific J. Math. **30**, 263–270.

BYE BYE SWEET 3.14159...

for Sūrya Rāghavendran et al.

Oh, dear rainbow of tears from my third eye, Let thee flow no-signalling this goodbye cry, Leaving behind the dusks and dawns over the silver lake, Where we've meditated in the search for the ground state.

I know: as long as our souls will be flirting with the divine, The dualities of self with another shall resonate in shine. And while the beauty of math rises from the ashes of youth, In the tryptamines we are all even with the truth.

As the life goes exchanged into the .tex-tiles of codecraft, Deep questions rise and fall in the microdosing of drafts; Integrating residua of dreams of the euclidean time, I see entangled friendship state in the heartmind of mine.

As it is time for us to cut-off, coarse-grain, and rescale, I attach a list of open problems, for a longer inhale:

The inner witness of the derived is-ness: is it a buddha or is it an illness?

The inner perception of directional evaluation: how a finitary rejection meets the unbounded creation?

For whom tolls the control bell of your samskara germs while integrating the signs of life into a locus of lived sense?

Is the namelessness of the innumerable shadow a curse or an acceptance in a meeting of the other?

How does timeless synchronicity of the preemergent bliss

break into the cause-and-effect, hit-and-miss?

And how to renormalise the range of all these questions without overwhelming breakdown of cognitive comprehension?

All deepest questions are open, and we all have a chance To pick fruits in the vineyard, drink, sing, ponder, dance.

> «Duplex est divisio — una substantiarum, quæ fit in hoc discidio — sed non animarum. Vobiscum sum, dum vixero spiritu presente, licet absens abero corpore, non mente.»*

3.IV/7.VIII.18, Waterloo/Warszawa

* Hospita in Gallia by anonymous author, from a manuscript dated between 1172 and 1200, published in: Wackernagel W., 1845, Gedichte des Archipoeta Waltherus, Zeitschrift für deutsches Alterthum 5, 293–299. (Cf.: Werner J.J., 1904, Über zwei Handschriften der Stadtbibliothek in Zürich, Sauerländer, Aarau, pp. 134–135.)

DOMES

translation of fragments of «Купола» by Vladimir Vysockii

I stand, as in front of an eternal mystery, In front of a great and fairy-tale land, In front of a salty and bitter, sour-sweet land, Blue, spring-water, rye-bearing.

Squelching rusty and fat dirt The horses sink up to the stirrups But they drag me through dreamy country That has soured and bloated from sleep. (...)

The soul, beaten by defeats and losses, – The soul, worn out by the rapids, – If the scrap has been worn out till blood, – I will mend with the golden patches, For the Lord to notice it more often.

1975; translated VII.2018 (using an earlier translation by Il'ya B. Shambat)

μSAMĀDHI 420

dedicated to Ravi Kunjwal & Vasudev Shyam

We celebrated the right to live, watching the strong sunbeams of late afternoon dispersing on the waves of water, still surrounded by the snow.

The sky was blue.

There are no fresh growing parts of trees visible yet, but some birds are building their nests, while other are already having them.

The pair of gees at the closed trail is waiting.

The female is sitting on eggs, while the male is watching around the surroundings of their home. We have not disturbed them.

Just exchanged the greetings.

We got a clue.

Vasu told me that a quite good strategy is to have few dominant involvements, around four, and then to make them compete for my attention, with a dominant involvement being dedicatively pursued, before being reevaluated, for about three weeks, or twenty days.

A 4:20 rule.

20.IV.2018, Cāra sau bīsa day, Waterloo

ĀKĀŚIC MOTIVES

«(...) he reached the final conclusion that dreams are entirely and completely messages sent to us by the Dreamer to indicate fundamental truths about ourselves (which we may ignore or not as we wish)»

A brief description of La Clef des Songes, by A. Grothendieck,
 https://webusers.imj-prg.fr/~leila.schneps/grothendieckcircle/Clefsummary.pdf

I. Seagulls have returned (19.03.18)

Today is a beautiful day, with a bright blue sky, no clouds, almost no wind, and an intense sunlight. Half of the Silver Lake is unfrozen.

When I walked today to the Dreamstitute, I saw seagulls flying in circles and happily talking to each other, straight over my head. My first intuition was: they have returned for the spring. Winter is over.

I tend to believe that each physicist, and probably also each mathematician, has a little personal viXra inside their own mind, where they dump all the incomplete, partial, philosophical,... ideas, which they discover to their own amusement on the path of their life. Blogs turn out to be a good way to unleash some of the inner viXraity for the exchange purposes. nCat café can serve as a good working example of it (for those for whom nLab is too far stretched out).

Today, on a yoga session with Tara, I've been looking into the tiny details of feelings with the trust, that the communication which I send into the world (semiotically modelled by my own physical body) is enough to become executable adequately, so I don't have to force it to the level, at which I can be 100% sure of receiving an immediate response at the a priori preset scale. I think about the current writing as a model of such action.

The optimal learning seems to happen at 70–80% of an effort. I'll then do my best to not overdo my best, avoiding hyperextension beyond this scale. It is interesting to see what it will bring.

The semiotics of relationships between mind and body, its possible mathematical models, and their relationship to such things as quantum field theories and quantum information theoretic relativity (with mathematical and physical concepts understood at least as the source of reliable systems of metaphors) is definitely something I will write about. Sooner or later...

Let's see what will happen next.

II. Last day of winter (20.03.18)

I went out again from the Dreamstitute to meditate with the nature at the time of sunset. I've restarted evening meditations around two days ago, the day after the Deep Dive 3.0.

Today in the morning I went over the Lake, to see the birds and what's new in their new home. I went into the building, – only after meeting myself with them, – for the full day of work, first after a long break. I was observing birds over the

Lake through the windows of my office.

I slept three hours on the yoga mat under my desk in the middle of the afternoon. During that time I was brought back to some parts of my heart-mind connection, from the time before I zoned out into a separated mind, as a teenager and onwards. I was very shaken emotionally by this dream. It was touching my authentic self, from the times long forgotten.

I went outside the most western side of Dreamstitute's building to see the late, purple-violet stages of the sunset. There were goose there, many of them. I looked around and cried, breathing very deeply and honestly. I saw a group of runners, and I reflected how strongly I do not reach out for the opportunities that are around me.

I am still lived by the dreams of a child, of a teenager. I'm dreamt by so many dreams. I was avoiding, as much as I could, the process of choosing, due to an attachment to understanding to what extent my choices can be arbitrary and naïve, while impacting the shifts of my ontology in the irreversible ways.

What if 'having a choice' refers to choosing between either an attachment to some uncontrollably restricted outcome or an attachment to some other uncontrollably restricted outcome? For a very long time I was not agreeing with the principle that I have to choose becoming bounded by some dreams for the sake of consistent emergence to happen. With this disagreement to perform a ritual sacrifice of the inner and outer potentials, there came both an empowerment and an isolation. What if the measure of intersubjectivity of one's own model is the amount of quantitative full and faithful functors in terms of which one can represent the subcategories of this model onto some selected class of the intersubjective communication models? But then how to value the subjectively perceived amount of richness of the nonrepresentable kernel against the subjectively perceived amount of richness of the represented part? And what if the attachment to a particular representability is always at the expense of loosing the awareness of equiveridicality of alternative, collective and individual, dreams? At the end, it is always some deep truth that becomes sacrificed to establish the 'unquestionable' massiveness of intersubjective 'reality'.

What if the dreams of sleep differ from the dreams of wake by the lower level of the quantitatively intersubjective coherence of the former, which is the price for, more free floating and deeper qualitatively, subjective experience of polymorphic underdeterminacy of self? The dreams of wake *dream themselves through* our acts, the dreams of sleep *are dreamt through* our inactivity.

Any form of emergent reality is based on sharing a dream, in which certain constructively determined channels of communication are presumed as safe/trusted by all sides, so all of agents use the part of their individually finite resources for compiling and running the particular shared code, and—as a result—partially participate in the resulting emergent space-time. Given any finite resource type theory, quantification procedures can be either constructive or approximative. Constructive ones determine what is known as facts (more generally: factoids), approximative ones determine states.

III. First day of spring (21.03.18)

Today with Comrade Mishatskii we have dived deeply *per pedes sovkolorum* to the muddy bottoms of the Reserve, that we found keeping no reserves, except a lonely little creek at its centre – its true honest heart. There were semi-dry swamps, with almost no birds, as if all of them have had run away from this astral locus in the heart-bits of a memory leak.

I realised that diving into the Zone (в Зону, друг мой) is a very specific travel to a sacred place, the one that is made through the places of death, which can be completely irregular *in time* (with respect to one's own standard daily multilayered time measures). So, the meanings gained by the traveller of those paths can be arbitrarily far astray from the default modes of thinking and perceiving, while still recognised as inherently exact, and thus—most probably—quite universally true (or, at least, neatly done, in a near-truth deceptive way). Upon returning, there is always a question: how much, what, and how to speak about it to others? Telling a particular story amounts to allowing for the embodiment of a particular system of meanings into oneself and oneself's concept of an "external world" (serving as the referential basis for gauging subsequently re-renormalised actions/updated priors), and this establishes an attachment to the specific forms of light and shadow that the given system leads to emergence of. It is a large responsibility.

At around midnight Comrade Suryatskii is (maybe) going to come over. I (definitively) miss our conversations. In the meantime, let me offer a tentative conjecture: tantra to quantum field theory is the same as a classical guṇa system to homotopy-simplexified quantum mechanics. Within this frameset, classical (rāja) yoga can be seen as a general (quantum relativistic) information theory, the holy grail (of those of us who gave up on quantising gravity in favour of emerging space-times from quantum theory).

The power of analysis (from Descartes-Leibniz-Newton, through lagrangean and hamiltonian mechanics, nonlinear operators on Banach spaces, microlocal

structure of singularities, and further on and on), lays in the art of effective approximation of infinitary relationships by means of a certain globally true bound, expressed in types that coarse it into finitary quantifications. In particular, diffeomorphisms give the space-times of general relativity a lot of inner cohesiveness, arithmetically controllable in a seemingly quite simple but algorithmically very powerful differential tensor algebra calculus. The lack of a structure deeper than germs of smooth functions (sufficient and necessary for solving partial differential equations) creates a lower bound for the complexity of an algebraic microstructure of this spatio-temporal framework. Whenever information theoretic foundations would introduce the *n*-ary (*n*-intersubjective) communication as an *n*-type, the question of the trade-off between algorithmic complexity and homotopical invariance of the landscape of post-postquantum *n*-intersubjective information theories will be faced.

Given a finiteness of some intersubjectively universal resource, understood as a basis for evaluation of (the possibility of) effective computation, algorithmic complexity stands behind the exact evaluation, and hence behind what can be asserted (constructed) as facts (or factoids), while the homotopic invariants stand behind approximative computability up to a certain order of exactness. The choice of the trade-off between them seems to govern the trade-off between whatever we would wish to call a deterministic 'emergent' spaces and their temporal dynamics (on the exact side of facts) and the generalised statistical (probabilistic, quantum, postquantum,...) inferences (on the approximative side), understood as morphisms of state spaces. When viewed from this perspective, it is tempting to speculate that the measure of an above trade-off is provided by an individual finitary resourcefulness (of awareness), which can be converted (sacrificed) either into an individual subjective temporality or for the purpose of emergence of some specific collective intersubjective temporality. Thus, the process of breakdown of a global hyperbolicity of a particular emergent space-time (e.g. in the Kerr spacetime, happening under the external horizon, when approaching the inner horizon) would correspond to the loss of an effective intersubjectivity of calculations/predictions within the boundaries set up by a given trade-off. More coarse statistical inferences, and thus more higher-order homotopical invariants, would still hold longer - for any finite amount of a universal computing resource - at the expense of less and less of fact(oid)s being constructible, due to the rise of their computing complexity. In other words, this amounts to execution of deconstructor of the intersubjective factoidal representability (spatio-temporal deemergence), freeing individual user's resources. In the limit, achieved at the inner horizon, one should expect a complete de-emergence of a space-time, which means that no intersubjective fact can be constructed in a finite time, no matter which renormalisation cut-off scale (complexity/homotopy trade-off) is chosen. Beyond this boundary, the geometry of information does not have any

computable models. The world of magnets and miracles...

Waterloo, 19-21.III.2018

ST. PATRICK'S DAY

a deep dive into a dream listening carefully

easing into stillness allowing ocean for its motives

awakened by a cold water crystal rainbow's lúchorpáins left alive grant three wishes

17.3.18, Office #256, Perimeter Institute, Waterloo

ANGELS ARE RENORMALISABLE

for my Waterlooan and Torontian friends

A fallen ideal angel Has found his way to his home How he will craft his own pathways Is perceived as unknown

Whatever happens – remember: There are always right and left sides Understanding self-cancels For those who are still here, alive

The meaning is compiled by awareness Establishing attachments – or not The finiteness of its resource access Duals infinity of worlds' words The silence beyond any sign
Measures key feature of truth:
The source of a bliss that is witnessed
Cannot be named

— can be lived through

19.2.2018, 78 Euclid Avenue, Waterloo

YYZ

Being in the process of transition over an ocean reminds me that travelling allows for a precise, warm-and-cold, observation how the entanglement of an individual soul with different places of habitation, and the meanings they provide into one's own life, cohesively changes with a change of a distance, and depends also on locally available resource of awareness. Separating from some inner styles of subpersonalities one is carrying, and entangling more strongly with other. The spaces in-between, astral elevators, with their quasi-nervous waiting for a time of departure, are the collective meditative retreats-in-motion. Emptying oneself from some of the past attachments, just for the purpose to jump into the burden of some other dreams and myths, of some other places...

14.XII.2017, Pearson Airport, Toronto

AFTERWORD TO SPIRITUAL TRANSFORMATIONS III AND IV*

«You will now all think I'm crazy – and of course you're right.

But at least I'm crazy in a mathematically rigorous way! ;)»

— Markus P. Müller, 7.XII.2017

(from a post announcing his preprint: Could the physical world be emergent instead of fundamental, and why should we ask? (full version), arXiv:1712.01826)

After half a year of active pursuits, Laboratory of Experimental Metaphysics kindly presents to you the next two series of the Spiritual Transformations. Part III is a visual report on the Summer Heaven Symposium experiment, run for three months during the summertime in Warszawa. Part IV (created in Warszawa, Toronto, and Waterloo) documents an investigation of the 'we are all mirrors' thesis, revisited from the perspective of left—right brain integration, while taking into account the difference of their respective (reductionist—holistic) cognitive

^{*} https://www.fuw.edu.pl/~kostecki/spiritual_transformations_2

functions. While the first two parts of Spiritual Transformations were focused on the immanently transcendental aspects of the semiotics of inner perception, the third and fourth part became focused on the structural patterns characterising the cognitive dynamics of the relationships between 'inner' and 'outer'. This included especially: the microlocal quantisation of the field of perception, the gravity induced by attachments (causing deformations in the light and shadow trajectories associated with other attachments), and the dialectical shifts between dual and nondual perspective (marking twists in the local distinctions between: lorentzian realities vs euclidean myths, observability vs imaginability, correlation-causation vs synchronicity). Among the focal properties that came into the stage of investigations were the glass-like behaviour of the projection on the boundary between self and non-self (in mirroring and translucent aspects), as well as the nontrivial semiotic curvature effects (horizons, singularities, partial reflections, breakdowns and re-emergences of causality...) associated with the dual-nondual geometrical logic of the left-right brain integration. While the questions about the range of intersubjective validity of individual observations of the properties of perceptive quantisation, semiotic gravity, and the geometric logic of dualisationnondualisation, are the keysprings of these graphics, the issue to what extent such investigations can be considered (by whom?, where and when?, with which resources?,...) as artistic or scientific is a subject beyond the frames of this text. The multidimensionality of the background of referential concepts and meanings, utilised in the creation of these works in the improvisationally meditative modality, seems to require writing long explanations in order to unravel the inner semiotic coherence and accountability of those objects, which is there despite the somewhat amatourish primitivity of their form. Avoiding this danger for a while, while still honouring the intellectual ponderings that are important to me, I admit that I foremostly followed my gut-feelings while creating those objects - in order to discover something new, to remain honest to my experience of here and now (with graphics expressing the metaphysical aspects of my ongoing experiences in intersubjectively perceivable, and explainable, symbolic and aesthetic contents), and, - last but not least, - as a meditative time of a deep relax in motion. «After all, music soothes even the savage beast.»**

7.XII.17, Office #256, Perimeter Institute, Waterloo

** Bryan K. Holland, 1994, *Time to relax*, in: The Offspring, *Smash*, Epitaph Records.

UNPACKING AT EUCLID

संयम संसार संसार संयम संयम संसार संसार संयम

Unpacking at Euclid

or: the Meditations on the Occasion of the First Snow, op.3 (with a kindred re-revisitation of Meditations of 2004* & of 2015**)

Dr. Afanasol Benz Laboratory of Experimental Metaphysics 78 Euclid Avenue, Waterloo, Ontario, Canaba 15th November 2017

Abstract

In this text some possible consequences of the following hypothetical concepts are investigated:

```
// Laboratory of Experimental Metaphysics almost equanimously presents
// Yet another semiotic prog-exploit for a chillful internet user
// Cross-braiding yoga with nonperturbative qft because it's late night
// The crystals of the first snow of this winter have melted
// I'm unpacking old things from different space-times at my new house
// And I've found a dragon suit lost for a while in a citta-vrtti monsoon***
```

As seen by myself here-and-now, from a posteriori context (adding current sentence to this Abstract after >95% completion of the main body of work), this text can be also sufficiently reliably considered as a side-product of a practice of an effective samyama in which some disbalances caused by some attachments were peacefully resolved by means of adhering to other, higher-order, attachments.

Keywords: #道人家; #QuasiYogicReflections; #ViXraśicRecords; #UnPackingAtEuclidilio; #Dryer'sEve MAPS 2027 Classification: Not yet known, since Grothendieck's Café serves stronger trips than Erowid Trigger warning: No essential beings were harmed, yet some revolutionary adlibs were executed

Introduction

^{*} As presented in: Wstepniak, Anyten Mlek 20, 3 (2004). https://www.fuw.edu.pl/~kostecki/anyten/Anyten_Mlek_20.pdf (in Polish).

^{**} As presented in: *Dialogues Heroes III: II3 Baranmos* (2015), https://www.fuw.edu.pl/~kostecki/iz_vagantov.pdf (in English).

^{***} As presented in: Jesień VIII (2016), https://www.fuw.edu.pl/~kostecki/jesien8.pdf (in Polish).

"Mathematical proofs end with q.e.d., which stands for 'quest est done', while the statements in science end with h.b.d., which stands for 'how bow dah'"

 observed in a conversation with Vasudev Shyam, somewhere out there in the Ontarian Movember between Perimeter Institute and The Owl of Minerva

```
void main()
{
```

cout << "Tantra seems to become more vogic when one offers an opportunity of an attachment to some colourful light and its colourful shadows while intentionally relating to both sides of the exchange equanimously ~ equiveridically. On the other hand, the relationship of a semiotic myth to any intersubjectively experientiable, hence temporal, local reality (āsana) seems to be analogous to the relationship of euclidean quantum theories to the lorentzian ones. The question is then what are the sufficient data to consider an individually perceived myth as 'effectively' implementable (Wick rerotatable) into the intersubjective temporal 'realities' that are shared by an individual with others (so, also, which are worth of 'doing'; 'doing' amounts to stabilise one's own trajectories of action along the congruences of re-rotatable myth's flow, as perceived in context's collective time, and in such case one's work that stems from individual myth re-rotation is recognised as a hamiltonian contributing to a given collective reality evolution). The task of a renormalisation of the idealised ('naked') equivalence stated in the first sentence of this paragraph (since veridicality is euclidean and conceptual, while equanimity is lorentzian and intentional, they can be considered as equivalent only with respect to certain constraints), making the 'effective equanimity' equivalent with the 'effective truth' within a specific given context of intersubjectivity (collectively shared experimental and inferential designs), has thus somewhat quantum field theoretic character. Assuming that the scale of impossibility of maintenance of equiveridicality can be considered as a thermodynamical temperature-like parameter in the subspace of possible cohesive states of cognition that are locally available to the user of a given environment, one can postulate that it is proportional to the inverse of a time of half-decay of a given asana \simeq Wick re-rotated myth. (With absolute equanimity corresponding to exiting the samsara of construction-anddeconstruction, and thus exiting timeness, the notions of stability and time of half-decay refer to the finiteness of time range between beginning of a constructor (emission; birth) and the end of deconstructor (absorption; death) of āsana.) Thus, if this time quantity sets a global time scale for the relative stability of a globally hyperbolic space-time that represents (by means of

emergence) a Wick re-rotated myth, one can achieve more stable realities of this type by cooling down the effective temperature of the attachmental mythcognitance (i.e. increasing the proportion of equiveridicalised, and thus cognitively disattached, myths – deconstructing parts of the prior (in the sense of groupoidal equivalence, as opposed to equational flattening of the prior) – with respect to myths equipped with a strongly exclusive veridicality assessments – peaking up parts of the prior (into the light) at the expense of pulling down other parts (into the shadow)). Hence, deconstructionism of yoga can be seen as tantric at any finite scale, because it admits the effective thermalisation as a necessary condition of any state with incomplete cittavrtti-nirodhah-isation (in which the nonzero conceptuality, and, effectively equivalently, nonzero timeness, is maintained). The three-stage practice of samyama, understood as achieving dissolution by focal concentration of awareness (dhāraṇā), homogeneity of meditative focus on an object (dhyāna), and integrative absorption (samādhi), can be considered as equivalent to the process of cooling in which the absolute zero temperature (euclidean informationlessness) of an object corresponds to timelessness (exiting beyond involvement into constructor and deconstructor) of the corresponding lorentzian āsana. Since in such case there is no emergence nor de-emergence, samyama provides a resolution of āsana. While remaining in the framesets of various collective/inter-subjective temporalities, one deals only with relative zeroes (up to a frame of reference, determined by the attachments collectively left unsamyamised), and thus there is always some residual structure in the 'effectively samyamic' zero-space. From the perspective of third law of thermodynamics, re-rotated into the lorentzian framework, this residual structure can be called 'time crystals'. From the perspective of an euclidean setting, all that remains, after all geometry of 'appearances in here-and-now' is homogenised-out from an 'individual cognitive experience', is given by the data characterising translation protocols between 'quantifications' in terms of the predictive models of an individual type and 'quantifications' in terms of some referential predictive models of an intersubjective type. (Thus, the lucid state of singular individual awareness is not completely homogeneous, as long as any remnants of intersubjective commensurability are preserved. Wick rerotated, it corresponds to phenomena of non-zero intrinsic mobility of hereand-now: the lack of any individual causality, combined with the presence of some collective modes of temporality, yet without synchronicities factored out, and thus without any single collective causal structure.) This type of data is organised bottom-up, and forms objects that can be called 'arithmetic crystals'. In essence, they should encode the criteria of trade-offs between geometric and computable aspects of the space-time emergence (and deemergence). As for now, the mathematical details of definition of time crystals and arithmetic crystals (such that would be worth of their name) are an open question. (Taking a look back at the role of forcing in the well-adapted topostheoretic models of smooth infinitesimal analysis, it is tempting to speculate that, in the context of truncated n-groupoids, arithmetic crystals could be representable in terms of the non-geometric model-theoretic aspects of the higher-order stacks, equpping the latter the bottom-up finitary perturbative computability semantics.) Yet, the basic principle is clear: crystal carries the residual arithmetic information about the multi-user compatibility data of the given 'effectively samyamised' ("ego-dissolved") individual reality, and in this sense it contains the sufficient data to reconstruct all quantitatively intersubjectively accountable samskaras of the last pre-zero-state (and, thus, characterisation of the possible space of tests for test-driven development/re-birth into that reality) when the geometric logic of effective thermalisation into truncated tantric groupoids is turned on again. Going to the effective zero-space to hear the spectrum of a crystal seems then to be quite near to a shamanic travel to the underworld ("hear", because observing crystal's spectrum can be considered as hearing the shape of the shamanic drum). It thus seems plausible to postulate that the partial restructuration of renormalisation techniques which can follow from such investigations amounts to changing the arithmetic crystal an individual user is attached to (and it should result with the change of an associated cohomology), which amounts to recoding of samskaras. This shouldn't be confused with the process of renormalisation itself, in which the massiveness of the structural prior knowledge and its cognitance (smrti) of an individual within a specific intersubjective communication network weights the relative contributions of the 'mass-clothed' time crystals of all contributing individuals (and subcollectives) into the collective temporal dynamics in an emergent (illusion of a)**** lorentzian space-time (āsana)."

```
<< endl; return 0;
```

Bibliography

- [1] Haggard H.M., Rovelli C., 2015, *Black to white hole tunnelling: an exact classical solution*, Int. J. Mod. Phys. A **30**, 1545015.
- [2] Kolossváry I., Kolossváry I., 2017, The prime grid. Introducing a geometric representation of

^{****} cf. «нли так только кажется или есть другой основной закон вместо закона о том что будущее не может влиять на прошлое» [«either it only seems to be so or there is another basic law instead of the law that the future cannot influence the past»] — Vladimir Voevodskii (vividha), 24.VI.2017, https://baaltii1.livejournal.com/200269.html?thread=4776525#t4776525.

natural numbers, arXiv:1711.02903.

- [3] Masanes L., Oppenheim J., 2017, A general derivation and quantification of the third law of thermodynamics, Nature Comm. 8, 14538. arXiv:1412.3828.
- [4] Robalo M., Schapira P., 2016, A lemma for microlocal sheaf theory in the ∞-categorical setting, arXiv:1611.06789.

Editor's comments:

- 1) Background music supporting the emergence of this textual flow: Rajesh Dash (Rydhm Dee), 2017, *Kundalini awakening psychill, psybient, downtempo mix*, https://www.youtube.com/watch?v=duQ9_578RKw.
- 2) This experiment is also a test of stability of a specific style of multiple re-looping of different semiotic layers while maintaining its local intersubjective coherence (adequacy), based on subjective assessment of sufficient "taste of (equi)veridicality" of expressed statements.
- 3) That's all folks, it's late and it's time to take out my laundry from the dryer. Ten thousand days is long enough. I'm going home.

संयम संसार संसार संयम संयम संसार संसार संयम

\end{document}

15.XI.17, 78 Euclid Avenue, Waterloo

INDEPENDENCE/REMEMBRANCE (स्वतन्त्र/स्मृति)

Ego' is the boundary at which a distinction between the 'observer' and the 'observed' is possible. It provides a locus of fixation of attachments, creating the space of (preselected) possibilities, within which everything what 'is observable' has to manifest itself. Statements about observability are thus dependent on the choice of the boundary, and are relative to it. By incorporating a specific piece of information that is used to redefine ego, specific different observables are becoming available, at the expense of some other observables becoming irrelevant or unavailable. Impermanence is impermanent, but in any effective model (of observer and observed) there is a particular choice of regularisation of levels of possible (conceivable) impermanence. Thus, many impermanent situations are not seen within a scope of a particular model. Seeing all of them is possible only by

resigning from any models, but this makes life's stability unsustainable. The notions of independence (svátantra) and remembrance (smṛti) are both strengthening an attachment to a specific choice of a boundary: the former by aiming against 'outside', the latter by aiming towards 'inside'.

11.XI.17, 78 Euclid Avenue, Waterloo

NOT A MIRROR

If it is Not a mirror Than it is that what is

I recognise all of 'you' As the part of 'myself' Not yet recognised by I as my self

As long as we both see differently As if in the mirror There will be the time

Being certain of uncertainty I welcome myself and you as the same truth That is beyond the abundance of here and now

> «'Wake up There still is a time" — Mirrors whispered...»*

24.X.17, 2+2=5 Christie St., Toronto

* English translation of fragments from: Leszek A. Moczulski, 1975, *Ikar [Icarus*], as performed in: Marek Grechuta, 1977, *Szalona lokomotywa [Mad locomotive*], Pronit.

ŚAVĀSANIC QG

for Lucelene Pancini and John Farley

The fountains of dopeness Are hooping In each quanta of time If you free your heartmind From the loops Of perfect possession

You may experience yourself And thus all In the oneness of life

In the flow of ups and downs Through the crystalline spectra And the gravitating mud

Thoughts that think us As the life lives us

Silence of the resolution Sun with wind after a sweaty rain

24.X.17, House of Yoga Studio, Toronto

* * *

in the night bus all stops are on request

except the first and the last

14.IX.17, Warszawa, while returning from the meeting with Karol Horodecki

ARHYTHMETHICS

for Tārā Kachroo

«R.[hythm] as presynt[ax]! (d'ailleurs partout!)» – Sergeĭ M. Èĭzenshteĭn (~1935)*

It is up to me To choose the criteria Of finite convergence And it is up to me To choose the variables Which I want to quantify

Given the available systems of my environment The intersubjective soundness of my performance Will be a matter of others' judgment

If I communicate my criteria well And if I seek their relevance to the criteria of others We may find an agreement on mutual adequacy

The boundedness and convergence is a key
To be able to represent an inner-defined faith
On the boundary of intersubjectively common facts

The yīn dive leads to acidic spiral of deconstruction and phantasy Its unboundedness is a sin of a naïve selfpleasuring heartmind Only completed bounded processes allow to perform an integration

And only such processes are communicable without seduction The latter is the same as a nonrenormalisable model Where you chase signs which diverge beyond the limits of your finite awareness

The nihilism of chán has its point, at infinity equivalent with zero Yet even then you have to eat and sleep And why shouldn't you, after all

Practice singleminded focus Tatra pratyayaikatānatā dhyānam Finitely complete bounded processes

Share the results with others
By the measures localised on the boundary
Let them choose

IX.17, Żoliborz

* A remark on the margin of page 79 of Èĭzenshteĭn's copy of: Marcel Granet, 1934, *La pensée chinoise* [Chinese thought], Albin Michel, Paris; as quoted in: Вячеслав В. Иванов [Vyacheslav V. Ivanov], 1976, *Очерки по истории семиотики в СССР* [Sketches on the history of semiotics in USSR], Наука [Nauka], Москва [Moskva], p.188.

LOST* IN TRANSLATION

yogis flow closely with dào yet do their cliffed burdens admit that the necessity of purity duals the fear of defeat?

a yogi moved and breathed out the voice: dual to void is the possibility of choice

as we both agree that to live is to be sthīrasukham āsanam dào's us as free

28.VII.17, Ząbki-Graniczna

* Lewandowski J., Okolów A., Sahlmann H., Thiemann T., 2006, *Uniqueness of diffeomorphism invariant states on holonomy-flux algebras*, Commun. Math. Phys. **267**, 703–733. arXiv:gr-qc/0504147.

I FIGHT

translation of «Walczę» by Marta Rakoczy

To have a zeal in my own silence, forged by modest stoutheartedness, is the green summit in feeling, the shield of heaven and the armour of my awakenings. Because I defend myself against entanglement among actions, among thoughts, which like to play human, among the wingless flutter, without real air, the puff of a crystal. Because I do not want to suffocate, in my own temples. I will be raising opened hands, to remember myself in a short moment within the colonnade of clouds,

to twitch with the constellation's chord. I want to smash windows, with humility, in myself, in the heart.

To let the stone, the tree, the fulfilment of grain, and the noise of spoken words to barge in.

I am knocking out the window in the name of the stained glass, which is able to be translucent, wear the humble transparency, the timbre donated to light, not its own.

≤ 2005; translated 19.VI.2017 (with some later corrections suggested by Daniel Ranard)

MASQUERADE

the geometer
draws zealously in the air
the multi-coloured shapes of hundreds of figures
with a ceaseless effort he is trying to
wove the veil separating from the passers-by
and to hide, in the figures, the helplessness
of the geometer –
in the midst of blizzard
the castle
stands still

the astronomer
looks from afar
on the pleiades of words scattered around
shining with the cold light
he closes the door with the latch
and throws in tears to ignite
the fire —
yearning for warmth
the night
does not end

the alchemist
leaning over the weight of the books
mixes the cards of their pages
in the deck with which he is played
he is still amused by this game
this brewing of an elixir
within —
among so many substances
looking for
the recipe

X.2004, Warszawa; translated I.2017, Waterloo

CARAVAN

translation of «Караван» by Boris Timofeev

We met strangely and strangely will disperse, With a tender smile our romance is over. But if we go back into the memory of the past, Then we will say – it was a mirage.

As sometimes in the weary desert I see beautiful images of wonderful countries, But these are ghosts, and the sky is blue again, And the tired caravan plods away.

Let all be ghostly, misty for me, As the mysterious deception of these wonderful eyes. We met strangely and suddenly you will go away, And, like a fate, plods the weary caravan.

1920–1923; translated XII.2016

AUTUMN VI

Autumn leaves in the mountains fall onto stones The sky and the wind see themselves in this scene The cry of a rain dances an outplayed theme With the rays of sun in the twilight of tones

2008; translated 10.XI.2016

INTERNAL RELATION AND CENTRAL ASIA

translation of the fragments of: «"Walczący islam" w Azji Centralnej. Problem społecznej genezy zjawiska» ["Fighting islam" in Central Asia. The problem of a social origins of the phenomenon] by Stanisław Zapaśnik, pp. 20, 44–46. (The joint title of these fragments was added by the translator.)

(...) In my research and analyses presented in this book I am using the notion of culture proposed by Emil Durkheim in 1912. According to his definition, a culture is a system of logically connected categories of thinking, specific for a given collective. These categories precede, as the logical condition, the sensory experience of people in a given collective. In such an approach to culture, it is pointless to oppose thinking and acting as different ontological orders. While, as seen from this perspective, the institutions of a social life are the symbolic expression of a thinking specific for a given collective.

(...) in face of these facts, a researcher stands in front of an intriguing question: why the boundary between the religious and ethnic identity in Central Asia happens to be so fluid?

While attempting to answer this question, a cultural researcher understands his task differently from sociologist. Similarly to the latter, he believes that the sense of individual's identity is constructed from the elements expressing convictions regarding her place, role, and position in society. However, he assumes also, that the knowledge that individual has about herself and about relationships associating her with other people is conditioned not only by the given type of a society and its state in the moment when he is carrying his research. In my case, due to the assumed definition of a culture, an attempt to explain the concept of "self" has to rely upon indicating the categories of thinking that are specific for a given culture, are conditioning it, and are the real foundation of identities, which can appear in different stages of an individual life cycle.

Due to limitation of a space, I have to stop at a few general remarks. First of all, I have to underline that in the traditional cultures of Central Asia we will not find any of these ideas that allow an individual in Western culture to think of himself as of a being ontically independent from a group, and that – as Steven Lukes¹

demonstrated – are also a foundation of an individualism. These aspects of a culture are completely omitted in discussions about the complexity of the problem of individual's identity in Central Asia.

The attention of researcher deserves to consider firstly the possibility that the understanding of the concept of an individual being in Central Asia is conditioned by the rules of logic of thinking that are different from those of western culture. Internal relation² is the foundation of thinking in Central Asia. In such thinking, things and their qualities are determined by the relationships in which we perceive them, and they do not exist independently outside of those relationships. Adoption of the principle of internal relation implies the view that the same from the point of view of western logic, based on the principle of external relation - thing A is not identical to itself, if we consider it not in the relationship to B, but in the relationship to C. It may be that our problems with the understanding of the problem of individual's identity in Central Asia arise also because, without losing our identity, we assume a moral postulate of the preservation of identity of personality independently of situation and our current relationships with other people. On the basis of my experiences as Central Asia researcher I claim that such moral duty towards oneself has not existed here in past. Not pronouncing one's own convictions in the presence of old people, and adapting one's own opinion to their opinion in relationships with them, is considered to be a morally proper behaviour even today.

Another consequence of presence of the principle of internal relation in thinking is the view on the relationships between a part and a whole³. In the traditional cultures of Asia it was impossible to think of a part as existing independently from the whole, and, vice versa, to think about the whole as the sum of its parts. The whole ontically precedes the existence of its parts, hence a part cannot possess properties independent of the nature of that whole to which it belongs. In such a thinking, an individual being is considered only as a sign of the whole. In the case of a human individual being, this means that it was considered in thinking exclusively as a sign of that whole, in which it was perceived. A researcher of Islam arriving from Poland is rarely asked whether he is a believer. If, however, such a question arises, the answer is not provided by himself, but by someone else present at the conversation, noting "but he is a Pole" to a questioning person.

The third consequence – important for understanding Islam in Central Asia – is the absence of the category of substance in philosophical thinking. In the thinking based on the external relation it is assumed that both the things and their properties, as well as the relationships, in terms of which we capture these things and their properties, exist objectively. Therefore, there arises the need to presume the existence of substance as an ontic foundation of independent being of things,

their properties, and relationships, in which they can occur to the cognising mind. The view on reality as the entirety of relationships perceived by the cognising subject is specific for the Eastern thought. This eliminates the need for inquiry on the ontic nature of beings provided in the sensory experience. Therefore, in the case of concepts which determine the contents of religious beliefs, as a rule we should not expect that we will obtain an explanation – important from the western point of view – of the ontic nature of a being that is signified by a given concept.

- ² The notion of "internal relation" was disseminated in logic by Bertrand Russell. However, it was used already by G.E. Moore in the polemics with the neo-hegelian ontology, e.g., in the article *External and Internal Relations* published in "Proceedings of the Aristotelian Society" in 1919. Due to the problem of individual's identity in the cultures of Central Asia, analysed by us, the critique of internal relation, provided by W. James in *Essays on Radical Empiricism* in 1912, deserves a special attention.
- ³ I owe the understanding of these differences in logical thinking to the book of Zoya Morokhoeva, *Lichnost' v kulturakh Vostoka i Zapada* [*Personality in the cultures of East and West*], Novosibirsk, Nauka, 1994. It is so far the only work that draws attention to the existence of internal relation in the cultures of East, to the consequences of it for understanding of the relationships between the parts and the whole, and to the absence of the category of substance in the philosophical considerations.
- ⁴ So it happened, that, although several times I was directly asked this question, I never was the person who answered it. I was always relieved by someone present, reminding that I belong to the nation that, as opposed to Russians, is known for its religiosity.

2006; translated 4.X.2016, Frankfurt am Main

* * *

I fell asleep on the floor of my office in the institute of theoretical physics somewhere in Canada on Sunday, the first of May

I dreamed that it is a summer of '99 we are somewhere in Sudety mountains at the geological camp the reality is so palpable

in my mind there is chaos and noise fleeting mindfulness

¹ S. Lukes, *Individualism (Key Concepts in the Social Sciences)*, first edition, 1973.

everything in short shots but other people are still so close we are walking along a path forged in the rocks over a creek in mountains I know that we are together and there is a whole life ahead

I woke up with tears in the eyes and with Post Regiment in my head «all wrong all that burns you»*

I miss that time I did not make it on time to be simply together

*

and supposedly I want to say just this because what else I reluctantly touch the computer keyboard virtuality mills our lives into a phantasm but the locker room around 7 a.m. in Hoffmanowa is long gone we bear the seriousness of responsibilities and personalities

here in Waterloo for last three days finally there are buds on the trees geese over the lake hatch the young yesterday I've spent few hours with two friends on the platform over the lake

once I used to write poor poetry then I stopped because it was a trap of poisons but yet I wanted to tell something important in it

three years ago when they've stretched me out of nothingness without light the doctor told: «if you want to live – breathe»

I try as I can but sometimes memory beats the glass it is hard to glue together so many broken pieces in these old places in Hoffmanowa, in Zwardoń, at geological camps and at these two camps of Old Wildcats I was more

I do not know if it's just a question of the intensity of this how my brain was processing the sensory data or whether it's a matter of selectivity of memory or maybe it's something objective these dreams return from time to time dreams in which I'm more than here («To those from the opposite – Carbonator»**)

I want to, with my honesty here, deconstruct the torment of this virtual connection to stand on the side of what I feel to be true because ultimately each of us looks at his or her own screen and we are rarely together unfortunately

I would like to create here an ending but probably I don't have anything more to add I wish you all a fantastic May picnic a lot of quality of life here and now and kindred people

«while owl, dog, and I – merging into the colours of background – we'll look again on the fight of night and day»**

1.5.16, Perimeter Institute (written during preparation of "Local quantum information dynamics", arxiv:1605.02063, and "Towards (post)quantum information relativity", PIRSA:16050021); translated 30.12.16, Waterloo

^{*} English translation of a fragment from: Post Regiment, 1992, Znaczy wiesz [Means you know], in: Post Regiment, 1992, Post Regiment, Qqryq.

^{** «}Carbonator» («Saturator» in Polish) was a street art poet, writing short poetic texts on various walls in Warszawa in the second half of 1990s. This particular text was located at the wall of the Post Office building at Nowogrodzka 45 street, and was facing the building located at Nowogrodzka 44. The carbon monoxide poisoning experience referred above has happened inside the latter building, over a decade after Saturator's poem has disappeared.

^{***} English translation of a fragment from: Post Regiment, 1992, Konie [Horses], in: Post

K.O. 4 CUPID

The systems of beliefs were circling in me, synthesising the parallel realities from the galaxies of resonant ontically-potent fragments, at the maximum flexibility of dance of semiotically-integrating arms between the detail and the whole. The meaning of the smallest move of grain of sand in my life was available to me in the ultraviolet completion of meanings in the renormalisation spiral of saṃsāra, freely flowing into some other, yet unknown, system of cognitive categories of intersubjective semiotic universe-crafting (as a type theoretic system equipped with an emergent geometric dual; Durkheim, Fleck, Granet, and Kuhn should be read in parallel to Brouwer, Chwistek, Heyting, and Kripke), such as, e.g., Buddhism (but which one?), or – let's say (after a pause, sprinkled with mycelium of distrust), – Gnosticism of XIIIth Century (with the fermented remains of Cathars' movement that became the muted breeding ground for anti-holist pre-foundation of the scientific revolution, Enlightenment, and Modernism ultimately).

Our infatuation wishes to exceed the darkness after the Decline of the West, – but where is the light? And where to go?... Is it a call for a radical love? Maybe not... I feel the taste of the last pill of postfoucaultian-postbaudrillardian pataphysical phantasy, the snake weave of ∞ -isomorphism between chaos and cosmos.

You are my very sweet wild geometry, an emergent resonance of the ocean, a beautiful mare. We are in the new old time of timelessness of our lives. We were always there, this is just a spiral,... and yet another kaleidoscope of systems and techniques of recursive weaving of the so-called real from the crown ćakra, instead of just having some cheap visuals, and, whip, whip, some more sage.

These Hungarian lips tempt me, but I listen the voices from the abyss. Hope. Silence. Delight. From Bacchus to Christ. And sometimes back again. Strange resonances of ākāśic gates. I can enter you, but will I enter the Room? I can take off the mask from the statue, but will the stone speak?

Stone cold crazy
Be here now
Earth awakens by tear.

6.3.16, Waterloo, Ontario; translated 9.16, also in Waterloo

AFTERWORD TO SPIRITUAL TRANSFORMATIONS I*

«A sufficiently degenerate language becomes so polyvalent, so multi-interpretable, that it obstructs the emergence even of a consistent, related group (set) of readings (receptions). In contrast to abstractions, realistic or naturalistic painting does not act as a language. Instead it assumes the status of diverse forms of symbols and symbolic allusions to its para-iconic content, such as mythology or even folk and fairy tale, as in the case of Hieronymus Bosch (naturally, there can always emerge hybrids like Pieter Breughel the Elder). Consequently, a painting which "translates" some proverb into various groups of motionless people is both symbolic and nonsymbolic, because language (the language of the proverb) is a system of semantic reference. It is clear that, apart from aesthetic value, such a painting has a certain semantic value as well, established in relation to a certain definite meaning. This aspect is analyzable by aesthetic theories used in the fine arts. At the same time we must realize that any sufficiently complex system is - in view of the theorems of information science - divisible into multiple subsystems of many diverse kinds. Of course in this situation the choice between the idiographic or nomothetic method depends more and more on the critic and increasingly less on the picture itself. To put it bluntly: viewers perceive whatever they shape, interpret, and aesthetically evaluate for themselves. Today such evaluations are already arbitrarily erratic, thanks to postmodernism which obliterated the boundary between a work of art and a piece of garbage.»

– Stanisław Lem, 1994, Lem in a nutshell (in: Swirski P., 1997, A Stanisław Lem reader, Northwestern University Press, Evanston)

What are all those .jpg files about? Information about what? Whose information? For whom? To be honest, I was more involved in the acts of creation, and the associated meditative spiritual, intellectual and emotional experiences, than in an interpretation of the collection of the data sets (or, rather, groupoids) that have resulted from the selective post-processing of outcomes of these acts. All of the above data sets (or, rather, groupoids) were constructed as improvisations, with no idea where they would lead to. There are always some feelings, some thoughts, some intuitions, some experimentation, but it is a flow that is synchronised with so many things, including mood, weather, the music I am listening to, myriads of other categories, as well as the noncategorisable shadow.

The myth of a "genuine representation" seems for me to be the original sin of photography. It consists of allowing oneself to be seduced into a specifically restricted understanding of our living (thus: unbounded, uncertain, unquantifiable) experience into a normative (thus: bounded, certain, quantifiable) construct of an (internal and/or external) "reality". The games with deconstruction of this myth became a vital field of the photography itself. Leaving the saṃsāric realms of the construction—deconstruction spiral, together with the (classy, yet so worn-out) issues of aesthetics and symbolics, I allow myself to consider the art of conveying the spiritual pulse of experiencing and becoming here-and-now as a way of transgressing beyond the original sin, back to the same root from which the power of classical painting stems from. (The generic powerlessness of semiotic analyses

^{*} https://www.fuw.edu.pl/~kostecki/spiritual_transformations/

of classical masterpieces uncovers hyperrealism, as well as disempowering rôle, of semiotics – at least as long as the latter is understood as a relationship between formal systems of signs and their representations.) Naturally, it is not an easy task to fulfil, and it requires high purity of the meditative state within which the act of registration of light's properties is performed. And I feel that I am still far away from it in most of my photographic practice.

Maybe this is the reason for this kindergarten-artsy stuff? I don't really know what I am doing. But if you would ask me to improvise some explanation, I would say that I have an impression that in my post-photographics I am trying to dissolve the fiction of a "factual representation" of the objective spatio-temporal localised fragment of an "objective global reality" which is associated to a photo (and, more generally, to any graphics – if one considers internal states of emotions, intuitions, and thoughts as a fragment of one's own "internal reality", which is nameable by means of a visual communication; in such case the core illusion rests in the idea of a static presence of any single "internal reality"). The method of transformative dissolution-mandalaisation of the original "realistic" (usually photographic) image, - which effectively becomes a technique of composition, is intended to point out to some sort of unnamed (because profoundly livedthrough) spiritual feeling, contained in the original experience of here-and-now that is an ultimate source of a given graphics, but becomes overshadowed by the dishonest act of a visual representation. In other words, transformative dissolving-mandalaising of an image is an attempt to rebalance the illusion of reality of the nameable content of experience (defined both by an illusion of a specific object and an illusion of a specific observer) in order to expose the immanent transcendence of the act of experiencing.

The only place where I have ever met an objective global reality was in the contents of the metaphysical beliefs of various people (and, yes, materialism is also just a metaphysics). My personal experience, and the experience of other people (at least among those, whose message is trustable enough for me), consists of a dynamic rainbow of different possibilities of feeling, thinking, perceiving, and becoming which are swirling in the improvised dance with the variety of possible structuralisations into concepts, attitudes, personalities, systems of thinking, etc. This dance has neither a single space (completely dominating type of control parameters) or a single time (completely dominating type of construction—deconstruction). If any of these deformations/transformations have brought to you a slight vibe undermining the myth of a local (internal or external) reality being just a passive fragment of an objective global universe (understood as an ontic container, not as an intersubjectively shared cognitive limitation), or if you felt for a moment some transgressive pulse stemming through otherwise mundane

and irrelevant collection of RGB pixels (including these words), then this text can make sense to you in a way similar to how it makes sense to me. Otherwise, let be praised your own being in its freedom from necessity of subordination to some particular sheafs of myths, and its freedom to bathe in the fountains of any possible ever-new experiences and the systems of their categorifications that you are blessed, and bounded, with.

As they say, – have a nice day.

3.2.16, Waterloo, Ontario

BE HERE NOW

for Djuna Croon and Jessy Cerritos

Embracing the silence... Embracing the potential of perception of tiny details... Embracing all that is given to you in this very moment... Instead of trying to fight it...

If the image is blurred... Are you dissatisfied?... Why?...

Maybe you can try to find something in it? Maybe it is something about your necessity of perfection? How about this?

Maybe it is something else?

It is only you, who creates meanings or lack of meanings in your life, after all. It is one of the lessons. We should take the responsibility for our reality-crafting. However, this doesn't mean that we shall become lonely. The beauty of fine-crafted art is a suggestion of a possibility of exchange and playing together.

Always adapt the level of symbols which you use to your own skills, your own needs, your own processes. Don't try to copy-paste someone else's symbolic system. People usually don't appreciate the power of their own minds enough. They are stuck with necessity of repetition of specific configurations of concepts. Try to just play it out. Be foolish, be wicked. Allow yourself to be vulnerable and free in creating the concepts.

But concepts are not enough. You need to have your clear heart speaking through them. If you just play with concepts, without allowing your heart to be, there would be no meaning in it, and this will be like a game of empty shells, the crushing grudge, crushing feeling of devastation.

It is very important to let your heart speak through your actions, through your body. You will find your own meaning by yourself, your own language, your own concepts. Just allow yourself to become patient, to become the monk of something stronger than religion: the monastic practice of reloving, regaining spiritual strength.

Sometimes you can use some tools, some concepts, or substances. But you should be very gentle with what type of stuff and how you are going to use... Because maybe there are more strong ways of becoming free from your shackles, without keeping yourself in the fight for releasing yourself from the shackles... Maybe part of the ego is precisely the belief that you have figured the right path of freeing yourself from the ego? Who knows... Nobody will tell you how to heal yourself, because the very essence of healing is regaining your own strength, though trusting again your own intuition, trusting your own heart. Don't let your mind lie to your heart. Let them dance together in love towards yourself and towards others. Love that listens to yourself and to others.

The necessity of adapting oneself to the forms of communication that other people impose over themselves in order to run away from their own weaknesses and struggles can become an illness of heart. By becoming genuine you also learn how to touch other people's hearts. This is a very gentle process. You have to be very careful about this. The stronger you are, the more responsibility – for others and for yourself – you are taking on yourself. Don't let your mind fool yourself. Your weakness is always your strength. Remember about humbleness. Striving for perfection is a seductive trap.

If you want to struggle for anything, – struggle to be here, right now, hold on, be real, and let it go...

«Spiral out, keep goin'»*...

25.XII.2015, 182 Lisgar Street, Toronto

^{*} James H. Keenan, 2001, Lateralus, in: Tool, 2001, Lateralus, Volcano.

ENDLESS FALL

My mind becomes a stranger When midnight rain drops fall Straight into soul's dark ocean Blackened long time before

The fire of fear and shame Frozen into the abyss of ice Inaccessible madness Glitters through empty eyes

Memories are not for me Pain is the only feeling That burns inside my head Bloody patterns on ceiling

Betraying the march of veins Void heart stops to pump It listens new orders, from devil Who's name is brain, somehow.

21.X.2001, Zabki/15.XII.2015, Waterloo

VOEVODSKIĬ'S CONJECTURE

Tonight I had a dream that in 1998 there was a conference in Montréal, or in some nature's resort in Canada, where Volodya Voevodskiĭ proposed that the remaining part of the knowledge (in the black hole information paradox) is contained in "the bulk" of observed universe of a (post-)quantum observer, and can be algebraised (using some version of homotopy type theory) into additional dimensions, tensored out as corresponding to another equally valid observer. Even Jurek Lewandowski was inspired by this possible "information theoretic algebraisation" of the problem of the observer. This was somehow connected with the bounds on information transmission provided by Cirel'son numbers (as if the availability of "higher order" tensorial structures could provide useful local invariants to quantify the homotopical structure of how the knowledge of two observers is recombined into a single universe). There was also some proof (called the "Infinity Conjecture") that "Voevodskii's dimensional composition" does not hold if a certain condition is not satisfied (I don't remember that condition). There was

a feeling of a profound parallelity of cutting-edge developments between ∞ -categorical homotopy type theory on one side and space-time emergence from local post-quantum information theory of relational observers on the other side (the latter driven by two communities: quantum information foundations and post-string theory "information theoretic" QFT).

What if: an intrinsic geometry and dynamics of one observer is "ignorance-glued" into a "bulk" (external/"dissipative") geometry and dynamics of the other observer?

10.XII.2015, Waterloo

DIALOGUES HEROES III*: ИЗ ВАГАНТОВ

or Dr. Afanasol's "Canadian Notes on The First Snow", vol. 17.4%

dedicated to A.F. & K.B., Djentians of The Space, {M.K.}^2, and D-Bros

«Profundity ratings for statements containing a random collection of buzzwords were very strongly correlated with a selective collection of actual "Tweets" from Deepak Chopra's "Twitter" feed (*r*'s = .88–89).»

- Pennycook G., Cheyne J.A., Barr N., Koehler D.J., Fugelsang J.A., On the reception and detection of pseudo-profound bullshit, Judgm. Dec. Mak. 10 (2015), 549–563.

PRE-CHORUS:

«Drive 3/4, bass 1/2, tone 1/2. That should give you the closest sound. (clean, delay)

^{*} D.H. II = Liquidation (2005), https://www.fuw.edu.pl/~kostecki/liquidation.pdf (in Polish), inspired by Hamlet (1990) by Franco Zeffirelli, based on Hamlet (~1600) by William Shakespeare; D.H. I = Szatan jako źródło ludzkiej pychy w utworach romantyków [Satan as the source of human conceit in the works of romantics] (1998), https://www.fuw.edu.pl/~kostecki/szatan.pdf (in Polish), inspired by Dialogi [Dialogs] (1957, 1972) by Stanisław Lem, inspired by Three Dialogues Between Hylas and Philonous. In Opposition to Sceptics and Atheists (1713) by George Berkeley.

E	
B	
G5	
D7-5h77-5h7-5-07	7 x8
A	
D05	-3 » ^[1]

संसार संसार [OPEN BRAIN CURTAIN] संसार संसार

CHORUS: Wind was blowing through the open ćakras. The wind of change.

PHILONOUS: Dear Hylas, I see that you also crave for some prolegomena to Hexensküche of the Grothendieck-Riemann-Roch veni-vidi-vici theorem on local life bundles?

HYLAS: Hopefully this time it will be something more pleasurable than Gorbachëv's silent betrayal and Scorpions' visit to Moscow.

PHILONOUS: Naturally, my grateful not-so-dead(-yet) friend. Since the massive collective trip of all Canabians on the National Legalisation Day became a critically acclaimed spiritual event (95% on Rotten Soultatoes), it started to attract all possible varieties of worldwide vagabond openminders, urged to represent and glue their mental schemes as a part of the nation-wide multidimensional cosmictrip on a weed space-ship into Organic Fractional Dimensions.

HYLAS: My dearest Philonous, while I may agree with you on the subject of our discussion ("was it unexpectedly ignited at some of those underground waterlooan seminars?" – Hylas tried to remind himself, but he had a feeling that the no-go lemma for infinitely precise processing, derived from the Transfinite Horizons Conjecture, prevented him from doing so; but maybe it was just an ordinary green hole, a temporarily blinded spot in chemically hyperconnected neural network), it is quite clear from a classical ("a term, which refers to XXth century, LOL" – Hylas has been *actually* thinking) education that the space-time has four, precisely four dimensions. As you know, this follows from the advanced geometric properties of the Hodge theory applied to the Yang–Mills type theories, and, more precisely, from the mathematics of cancellation of ghosts in the nonabelian setting ("...and you may be interested in a little historical remark, that some indications of this were provided already by Finkelstein in the Old Sweet Seventies" – Hylas decided not to add, before having a kinky game of verifying this claim by himself through a nitpicky research into the original papers).

PHILONOUS: The love for illumination and enlightenment, jointly replacing the ancient category of truth—as long as the latter is allowed to be considered in an appropriately higher-order weakened form—is the only struggle that we could strive for together, the beloved co-traveller of my local lucid daydreaming

("exosemiotical junk-joint at the heart-mind betrayed" - was synchronously rendering Philonous, while observing that the structure of an attached p-adic probability estimate is computably generalised Morita equivalent to a derived Picard groupoid in one of the local quasi-coherent fibrations of his local mood geometry). However, let's stop being deleuzed in the derridorium. In the First Enlightenment æpoch of the New Middle Ages the "old great four" dimensions of space and time, so bravely controlled by the oldschool engineers of mechanical machines, became only a pervert (or, sometimes, sentimental) passion of an extravagantic minority. The favourite modality of most of the population was the game of SSAM (Self-Syncopated Awareness & Multiperception). The notion of a citizen faded off into the notion of a user. In order to design proper tools to feed the growing needs of subtle mixes, completely new semiotic learning languages and corresponding emergent environments had to be introduced. The relationship between them has replaced the old adjoint duality, between syntax and semantics. (Saussurean and tarskian surgical cuts were expelled into the barely inhabited caves of the last positivistic Talibans with their exclusivistic reductionist occultism. Let them play their fetishes, someone has to continue the research on the plague.) Logos and Theos were floating in their tantric kundalini dance, giving re-birth to all post-postquantum stuff in which the Multiverses of Geist (emergence-bearing higher-order thought styles of thought collectives) were modelled in.

HYLAS: But please, don't forget to remind us also that those SSAM devices were useless without the pills, which were allowed to be sold only in the special license stores, with complete control and tracking of each particular individual intake. Moreover, SSAM pills were suspected by some (unexplainably but peacefully deceased) critics to be a low-quality mass-produced EVIL (Extracted Venomial Iboga Lethality) acid. Recently discovered additional "QM::rand(); scrolls" fragments of in-code commentaries (hidden in the abandoned parts of the random number generator code, called "junk genes") contain allegations of a serious reality fraud: removing specifically those of organic microcomponents from iboga that allow for the holistic "ultimate awareness / God-level compassion", and substituting it by the dog-level reductionist BOSS (Babylon Obeyance Synthetic Subjectivity). The allegations of an inside job supposedly made on 11/7 by the government of The United Protectorate of Psychozoic Provinces were quite popular for a while, especially at some shady areas of the flea markets, fuelling mutual distrust between users, and a good income of the illegal iBOGa dealers (called "Dervishes-D") as well.

PHILONOUS: Despite the dzierżyńskian smell of a massacred human flesh here and there, at the outskirts of our Happy Obligatorily-Phantasmatic Empire, the dialectic historical processes' monad of saṃsāra wheel's endomorphisms definitely needs to be taken into account while attempting to perform an optimal estimation

of the value of a handicapped Enlightenment in the mental category synthetically enriched by anyone who no longer feels the necessity to endlessly cry over the inevitable nonideality of all mortal things, at least because they were anyway designed to be such ("But, after all, he was right about this iboga stuff... Maybe I should not pretend that I am more enlightened than he is? What if some day he realises it? Would it be possible to play out the trickster's improvisation game once again? Let's cover it up with one more layer of a crazy semiotic spiral before he will see the weakness and fear in my eyes!" – the creepy purr of an old buddy, the neurotic inverse pentatonics, was gripping his stomach filled with the big pile of ice-cream with some weedtella inside it). As we all know, the DMT electro-insectic guardians, intersubjectively agreed to be subjectively perceived as nonsubjective, bring a legitimate entry to the higher-order steinerian levels of Naturwissenshaft. «Was vernünftig ist, das ist wirklich; und was wirklich ist, das ist vernünftig»^[2]. Vehrstehen Sie? Atman macht frei.

HYLAS: I appreciate the style in which you are trying to play out the pseudonietzschean hedonistic argument for this "synthetics are not so bad compared to organics" old crap, but let's be honest. Only the lineage-rooted shamans are able to play dice with the real death and life. And the price is high, way higher than you could ever get even with Dawamesk B-2. Face the comonadic adjunction, my friend of trickstery! Synthetics are just mental illusions that fool you into broken daydreams. The authentic spiritual experience cannot be conditioned on the external stimulation of the mind-waves, independently of how luxuriously you are trippin', or what the size of your astral synchronicity portfolio is. Yes, one can always fool some chicks on tantric festivals, but sooner or later, you'll face the ironic glimpse of an ākāśic smile. «Je n'approuve que ceux qui cherchent en gémissant».

PHILONOUS: «There is no such thing as a natural death. Nothing that ever happens to man is natural, since his presence calls the whole world into question. All men must die, but for every man his death is an accident, and even if he knows it he would sense to it an unjustifiable violation.» Well, you may or may not agree with these words, but in the end it will be only your best personal bet among all of the possible unknown contexts of interpersonally emergent realities, and you can only partially design them.

HYLAS: So what do you propose for an interesting way of life in the artificial heavens?

PHILONOUS: Many fruits of the doomsday's deceiver spirit are on this tree. Let's just try one of them, and see...

HYLAS: What's else to say?... – I'll go this way. Let's take the snake and bake the cake with no mistake in the intake.

[CHORUS starts singing tuvan overtone shamanic song. PHILONOUS reaches out his semi-cyborgised quarter-bioelectronic hand towards the art installation above them, and takes down an apple. CHORUS stops singing. A silent moment of contemplation. PHILONOUS takes a bite (and at this moment we hear a powerful tibetan gong sound) and passes the apple to HYLAS. HYLAS takes the apple, with an accompaniment of a very insane violin and harmonica music. Apple comes closer, closer, and closer to HYLAS' mouth. Violin goes crazy. VIKA goes wild. HYLAS bites. Second tibetan gong. Silence. Darkness. Binaural isochronics after some noticeable pause. Then return of the light — but only as a single reflector straight onto PHILONOUS. His voice has changed. His clothes have changed. Now he is the TRICKSTER of the Ceremony.]

TRICKSTER: "...so the practical unverifiability of Mochizuki's 'Inter-universal Teichmüller Theory' by the worldwide mathematical community seems to be a borderline experimental example of the 'for-all-practical-purposes correctness' of Voevodskii's argument for the use of higher-homotopical type theories as a foundation of mathematics based on computability instead of the ancient 'theorem-and-proof' construct of a mathematical 'truth'. Ramanujan never needed the latter anyway, right? And this is the whole point of the onticallynoncommittal post-postquantum post-poststructuralism, or Physics 2.0, if you want to give this viXra-quality stuff a name,..."—Dr. Afanasol Benz emptied his pipe of the burned ashes of The Previous Approaches, and after a small break he decided to continue (but—why? (or: why not? ("in fact, actually, why not?!" -HYLAS was thinking all that time)))—at some random further point ("there is no such thing as randomness, according to Jaynes"—some parallel process in HYLAS' mind has been communicating in the shadowy offshores of whatever has remained of his consciousness) his improvised verbal investigation of internally perceived visual transitions that were growing recently at the southern outbacks of his mind—"...just a specific application of the new categorical fusion of logic with geometry that transcends an observation that the specific theory of geometric objects, with proofs of their properties ranging over a class of methods, may be often just a particular 'spatial' model of a refined version of a theory, which ranges over different class of models, with different proof techniques, based on different logic (e.g., sheaves over the opposite category of smooth rings model more theorems of a theory of smooth manifolds then the category of smooth rings – at the expense of giving up tertium non datur). The new principle seems to say that the procedure of intertwining between different viewpoints—logical, programmatical, post-quantum, homotopical—is an inherent part of their own foundations (in nonreductionist, neo-lawverean, meaning of this term): their mutual representability is not a feature, but a defining property, pointing into context-dependence of association between systems of finitary computability on one side, and theories of

geometric forms on other side. This can be pragmatically seen as allowing one to essentially enrich a playground for construction of different visual representations of specific theorem-proving systems, yet the deep insight is provided by considering these viewpoints as the particular aspects of a single semiotic universe that is generically not divisible into an geometro-algebraic structure (ontology) and an algorithmic computational model (epistemology). We need this not only for effective programming of those insanely hyped very deep neural learning algorithms, which applied to Witkacy's paintings and novels will design specific modular, programmable genetic circuits that would control specific electronic plant and organ growth functions (an ironic volta with respect to O. Becker & G. Selden), but also to deal sensibly with such crazy mathematical universes as this 'inter-universal Teichmüller' stuff. Mochizuki's great sense of humour, providing radically comic and-simultaneously-serious specification of Denkstil for establishing the criteria for the optimality of proofs of correctness can be appreciated especially from the perspective that takes all of his theory as a mathematics created in order to intersubjectively communicate the contents of visions and insights obtained by heavy-duty systematic intakes of psilocibean shrooms with some occasional shintoic channellings. Doing boolean and intuitionistic logic was good for set theory and its topology. To address more advanced geometrical objects and proof tools, logic has to be less 'globally reproducible', corresponding to a shift from primarily deductive and ontic to primarily inductive and epistemic semantics. Only weak patterns can be repeated, and in a specifically homotopically 'dynamic' way. To transcend the cute mythology of the '68-'69 protests (as indicated by baudrillardian turn in critical philosophy), beyond the worn-off discoursive split into C*-algebras with countably complete orthomodular lattices of projections on one side and kripkean models of intuitionistic multi-sort higher-order type theory inside toposes on the tales other, beyond the fairv of nonabelian stackification Tarski/Stone/Gel'fand duality, one has to localise the logic of inductive inferences on Banach preduals by equipping hom-sets with relative entropic evaluation, while following the path of fibrations into higher-order weak groupoids of informational quasi-equivalence, and so on... Motivic patterns... Don't forget about the neo-fregean ideas of Makkai in (Montréal, August '08)... and further... through the chilled-out descent lounges of the Grothendieck Café... Much to say... Maybe one day..."

[the voice of TRICKSTER becomes more and more rippled in the frequency floatations equipped with a slow but steady sound amplitude decrease and accompanied—during all of his monologue—by HYLAS' sun salutations on the edge of a visible scene with the multi-light visual rainbow effects around him. Everything becoming gradually slower and slower until the lucid state of a singular awareness of being here and now that stops all movement, wherever it has been just before.]

CHORUS: Somewhere, in the night, watch the weather change, while the winter snows of South-Western Ontario gently weep in the waves of Lateralus' riffs...

संसार संसार [CLOSE CO-B(R)-AIN KURT-AIN] संसार संसार

POST-CHORUS (&PHASER):

[with binaural isochronic sound in the background]

...so if I'd believe in something from nothing today, in laudative *Te Deum*, Wouldn't it be better to believe in the happy Mickeymouseoleum? In the spirits of dreams, the spirits of trees,

And—free of blood and gluten—the simulacras of tears?...

«	e	
	b	
	g	
	d 775h77-5h7-5-0	x5
	a	
	d 5	≫ ^[1]

Waterloo, Ontario, 23.XI.2015

DANGER LIKER

for my djentle friends

Beneath the heart The spleen of tears Delusive dismissed

Molestic defector Fearjecting heartspector Protector who failed

Randomness controlled Void sound of bones Self-broken hearticide

^[1] Eric Alli, 2012, tabulature for: Adam T. Jones, 2001, Lateralus (in: Tool, 2001, Lateralus, Volcano).

^[2] Georg W.F. Hegel, 1820, Grundlinien der Philosophie des Rechts oder Naturrecht und Staatswissenschaft im Grundrisse, Nicolai, Berlin (Engl. transl.: 1896, Philosophy of Right, Bell, London).

^[3] Blaise Pascal, 1670, Pensées, Guillaume Desprez, Paris (Engl. transl.: 1688, Thoughts, Tonson, London).

^[4] Simone L.E.M.B. de Beauvoir, 1964, *Une mort très douce*, Gallimard, Paris (Engl. transl.: 1965, *A very easy death*, Pantheon, New York).

Time to end all of this Animals against the machines Return of organic from mist

6.X.15, The Space, Kitchener

8:09 7.5.15

translated by Michał Kotowski

The key is the frequency I'm working at.

Lower the frequency to bring out a longer wave of consciousness.

A magical falling in love with life, combined with mindfulness – a sort-ofmythologisation of here-and-now, focused on opening, not closing, of all the senses.

Dynamic changes embraced with loving affirmation.

Mindfulness instead of mindlessness.

A marvel in every detail, because of perception beyond patterns.

Fears do not exist, as they are a trembling of a fiction – of a personality built on habits and appearances.

That which exists abundantly in the field of view is slow. Even chaos is infinitely

slow

The belief that one can be late for anything is an illusion.

One is always just in time for the foremost feast. It is right here.

A characteristic, warm and outward – and at the same time enfolding – care, tenderness, delicacy.

A softness of movement, a step beyond the nonsense of division into the active and the passive.

A dance that is a sensitive contemplation and a creative affirmation.

They do not preclude appropriate actions, filtering out noise and cracks; yet actions that are loving rejections – not reactions.

Remaining in reaction is a trait of a superficial personality, this armour of distrustful disbelief in the possibility of synchronisation in slow being.

Outside the window, where the trees and sun illuminate the lawn in their shadowplay, a duck is strolling;

a small rabbit is hopping in the bushes, other ducks are flying over the lake; one can hear their cries, and tweets and trills of small birds in the tree branches. Ever slower, ever more beautiful, ever more towards oneself in the foundation.

7.V.15 (two years after near-death carbon monoxide poisoning), Perimeter Institute, Waterloo

CONFERENCE IN TIBET

I dreamed about a town in Tibet which was post-Soviet and medium-size. It was taken under control by pro-Russian troops, which from time to time were doing rides around the city and killing people. The city was half-ruined. One of the largest buildings broke in half as a result of intense Russian fire and collapsed straight before my eyes. I went out of the city, while planning a trip to Central Asia and Tibet (the more idyllic one) for next year together with some girl, with whom I was travelling (we were travelling together with a few people). We reached the town again at dusk, which was simultaneously a morning. On the previous day I had an appointment with Časlav Brukner, but I gave up this meeting, deciding that we will talk later. After I got back into town, I learned from someone that Časlav is dead, because he was shot in the head by Russian sniper's bullet. I was very shocked by this, especially since the city seemed to be relatively calm – Russians controlled everything, but the guerrillas (to whom I belonged, in some vague way) still had some strength and resistance, and there was a ceasefire at that time. But then I found out that the occupiers are rallying and shooting people again. I was deeply saddened that I will never have a chance again to speak with Časlav, while I was on the verge of learning from him some very important things. It was also shocking that I have learned of his death only as if by an accident, and that everything was already cleaned up: even though Časlav was one of the most important people among the rebels just before (in some way partisans were simultaneously the conference participants), the pyramid of hierarchy has immediately moved, and it seemed that life goes on without any special rememberance of this loss. In sadness, shock, and disbelief I grabbed the lapel of one of the important guerrillas-organisers of the conference, asking: "What else I do not know?" He casually told me: "Your friend, Markus Penz, is also dead" – which meant that he got the upper part of the skull shot off, and that he is lying somewhere in a critical condition. I started to act verbally aggressively, until they called few soldiers, who clearly suggested to me that either I go away, or they will imprison or kill me. And then some girl, who was someone like my girlfriend or my lover, told me: "Now the girlfriend of Markus will have nothing, because everything will be taken by their grandchildren". I told her to not worry, because it is mandatory in Polish law to leave the sixth part of inheritance to a widow. And then this girl said that in such case I absolutely must marry her, to disinherit our grandchildren. This scared me, and I left. I went two quarters away to the tram stop, to get to the hospital where Markus reportedly was staying in the critical condition. I waited, looking at the landscape of the city, half-turned into the ruins, and covered with an intense bloody red colour of the sunset. Then, suddenly, out of nowhere, Markus has appeared. He had the upper part of his skull truncated, and sheltered by shoddy and rusty lid, welded to the rest of the skull through some plates or legs. Markus was cheerful, but behaved a little strange, and it was

not clear to me, whether this was still him or his half-dead simulacra. He seemed not to care that he almost died, and joked in a carefree and a little shallow way. I wondered why there was about a two centimeter long gap between the open skull with brain and the lid. In particular, it bothered me that flies can fly in, and sit on the open Markus' brain, disrupting his thinking or infecting him. Markus somehow did not care about this, and said something like "I put a gauze on the brain, so it is hygienic". Then something else happened, but I forgot what.

24.VI.2014, Wien

STALKER

(after a film directed by Andreĭ A. Tarkovskiĭ, based on a script by Arkadiĭ N. Strugackiĭ and Boris N. Strugackiĭ)

translation of «Stalker» by Jacek Kaczmarski

Who of us has never travelled by a drowning wreck? Who amongst us dares to contradict he is flawed? Who of us has never been by a blinded bird misled? Who has never been led into wasteland by a stray dog?

And yet, we are enthralled by the fenced area Which is excluded for a purpose – we want to believe It's not us within it – it's taken from us – the Zone It is for us to pace it, with our own gait, be it unfirm Until all hope, defeated by bitterness, is out – gone

Thus, in spite of wires, guards' posts and watchtowers We long to go where going is forbidden
To possess useless, ridiculous mysteries' kōan
If only we could burn with longing fever once again
Before a sudden blast flicks off the occipital bone

The way might be misleading and roundabout Our guide might be a swindler, craving to make a dime But better this, than death on calcifying ramparts' dawns At the trenches and invisible borders' lines Where – so resembling a convict – soldier yawns The path leads through the inundated glens of ages gone Under the shallow waters – illegible kites of times past A trail over the icons, the manuscripts, and guns Above which the paddle draws Apocalypse's splash The wail is not for us, nor the ancestors – but for sons

Is then the truth for us to find – an empty room With switched-off phones, that suddenly start to ring? The dearest blood, that slowly flows in lifeless brook A forceless wrath against indifferent Firmament And the spell of words to save from bad bewitchments' hook?

Is then the truth for us to find – a table of stone
From which the object of the prayers fell, untouched by hand?
In transport's wheels clatter – Beethoven's aria blazes?
Bottomless abyss, and – above it, suspended –
One's own face, watching itself in spaces

Of the drowning – whom fortune did not send a raft? Of the flawed – whom it had ever failed to heal? When the blinded bird has finally found the right track And the stray dog has at last sat at the doorsill

17.6.1988; translated jointly with Jadwiga Smulko 27.12.2013–20.5.2014

(cf. www.fuw.edu.pl/~kostecki/msx/stalker.mp3 for the meditative soundscape adaptation of the fragments of this translation, featuring LIGO's GW150914 gravitational wave signal of two merging black holes, and Jessy Cerritos on bass)



目次

20 years later	27.II.20
Darkness and mould	21.III.19
About these graphics	III.19
Semiotic defence shield	27.VII.12/13.XII.18
Tempus fungit	18.XI.18
Philo (The unbearable itchiness of now)	18.XI.18
Inter-universal samurai (宇宙際侍)	1.VIII/23.IX.18
Bye bye sweet 3.14159	3.IV/7.VIII.18
Domes (translation of fragments of «Kynona» by Vladimir Vysockii)	VII.18
μSamādhi 420	20.IV.18
Ākāśic motives	19–21.III.18
St. Patrick's day	17.III.18
Angels are renormalisable	19.II.18
YYZ	14.XII.17
Afterword to Spiritual Transformations III and IV	7.XII.17
Unpacking at Euclid	15.XI.17
Independence/Remembrance (स्वतन्त्र/स्मृति)	11.XI.17
Not a mirror	24.X.17
Śavāsanic QG	24.X.17
* * * (in the night bus)	14.IX.17
ARhythmEthics	IX.17
LOST in translation	28.VII.17
I fight (translation of «Walczę» by Marta Rakoczy)	19.VI.17
Masquerade	X.04/I.17
Caravan (translation of «Kapabah» by Boris Timofeev)	XII.16
Autumn VI	.08/10.XI.16
Internal relation and Central Asia (translation of fragments of «"Walce	zący islam"
w Azji Centralnej. Problem społecznej genezy zjawiska» by Stanisłan	Zapaśnik) 4.X.16
* * * (i fell asleep on the floor of my office)	1.V.16
K.O. 4 Cupid	6.III.16
Afterword to Spiritual Transformations I	3.II.16
Be here now	25.XII.15
Endless fall	21.X.01/15.XII.15
Voevodskii's Conjecture	10.XII.15
Dialogues Heroes III: Из вагантов	23.XI.15
Danger liker	6.X.15
8:09 7.5.15 (translated by Michał Kotowski)	7.V.15
Conference in Tibet	24.VI.14
Stalker (transl., jointly with Jadwiga Smulko, of «Stalker» by Jacek Kaczmarski)	27.XII.13/20.V.14

cover graphics: Half-portrait with still life (11.X.2018, Sopot); inner graphics: Cmankep: Impromptu (~27.XII.2015, Toronto)