

ADVENTURES IN PIANO - 3/28/18

by

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ABSTRACT. As discussed in [1], up until around 2009, I had discarded the possibility of ever gaining sufficient technical ability to play live unedited classical piano solo at a professional level, independently of the merits of any musical ideas. The situation started to unexpectedly change since then, and over the past year, there has been a radical continued accelerated improvement in technique and musicality. Furthermore striking interconnections between my pianistic adventures and my mathematical foundational work have arisen. We discuss these developments along with my plan to document my upcoming struggle to reach the top of live unedited classical solo piano playing in terms of quality and creative imagination, if not quantity. If successful, this promises to have a major implications for piano coaching, electronic piano performance, and traditional piano performance.

1. The Foundational Life.
2. The Piano Language.
3. The Piano Life.
4. The Plan.

1. THE FOUNDATIONAL LIFE

I am a Foundationalist that lives the Foundational Life. I articulated the Foundational Life fairly clearly upon my arrival as an MIT freshman in Fall, 1964, and later interacted with Hilary Putnam (he was there and moved to Harvard shortly thereafter). After accepting an Assistant Professorship at the Stanford University Philosophy Department, I interacted with Georg Kreisel, Solomon Feferman, Dana Scott, and Patrick Suppes. These five scholars also lived the Foundational Life with varying levels of intensity and breadth.

In the Foundational Life, one is continually formulating novel research projects heavily based on what I call General Intellectual Interest. There is an emphasis on the quality of knowledge and understanding rather than either quantity or contemporary relevance. Typical celebrated contemporary art, science, and engineering has quite different priorities.

Consider, for the sake of argument, a field X - like statistics or physics or mathematics or computer science or music or history or psychology. My points may be clearer if one takes major or even minor subfields of such large fields. Experts in X are going to be primarily interested in state of the art advances in X and various aspects of X that are only of clear interest to experts in X.

But the intellectual world is very deep and wide, and so what are experts in fields other than X, especially fields adjacent to X, interested in about X? Naturally, the most fundamental aspects of X that distinguish it from other fields, and how X fits into the wider intellectual universe. I.e., aspects of X of General Intellectual Interest. This is exactly what the Foundationalist focuses on when pondering X.

Foundational advances generally are very hard fought and slow in coming, and follow comparatively standard rapid developments often by decades and even centuries. They generally require rare special multidimensional intellectual abilities. Furthermore, the usual intellectual and cultural Institutions are not equipped for a variety of reasons to support or even recognize Foundational Adventures. The closest environments friendly to the Foundational Life are the Philosophy Departments in Universities. However, for a number of reasons that I will go into in my Foundational Manifesto, Philosophy Departments have not come close to living up to their expectations for a very long time.

I plan to discuss these ideas at some much greater length elsewhere, in a Foundational Manifesto. There I will argue that the Foundational Life represents the highest form of intellectual activity, not only in terms of General Intellectual Interest, but also in terms of the intellectual power it requires, and in terms of its long range impact on the entire intellectual landscape. Furthermore, the Foundational life holds the key to a

revolutionary revamping of teaching and learning, as well as of interdisciplinary research.

By far the most advanced aspects of the Foundational Life has been the developments in and around the Foundations of Mathematics. And for this, the Philosophical community has to be given a significant amount of credit for its early developments.

We expect that the great successes in the Foundations of Mathematics need to be and will be taken into account to provide guidance in order to spur the development of other aspects of the Foundational Life.

Although I have spent almost my entire Foundational Life in and around the Foundations of Mathematics, I am taking steps to expand my horizons now in various ways:

A. A systematic restatement of Foundations of Mathematics through a series of postings on the email list FOM <https://cs.nyu.edu/pipermail/fom/> that I founded in 1977. These are titled "systematic f.o.m.".

B. The systematic organization of my Collected Works.

C. Foundations of Physical Science. A convenient entry point for me in this direction appears to be the Hungarian school led by Hajnal Andreka and Istvan Nemeti in which major issues are addressed in a systematic way.

D. Foundations of Music. See the rest of this manuscript.

E. Miscellaneous Foundational Adventures. To be revealed as they develop.

F. Foundations of Foundations. See the forthcoming: THE FOUNDATIONAL LIFE - a foundational manifesto.

2. THE PIANO LANGUAGE

As discussed in [1], I made purely electronic hyperedited piano recordings which can be heard at <https://www.youtube.com/channel/UCdRdeExwKiWndBl4YOxBTEQ>. Up through then, my plans for Foundations of Music (the Foundational Life directed at Music) was to get at the mystery of just how professional pianists create such

sensationally moving performances, which of course involves a myriad of sub issues, all of which are utterly lacking in Foundations. Ultimately, I decided that the best course was to actually create sensationally moving performances, and also use them for data analysis to guide new foundational adventures in music.

Yes, moving performances they are, maybe perhaps sometimes sensationally so. I have seen grown people unexpectedly crying when they listen to my unconventionally slow rendition of Beethoven's Fur Elise there. Normal performances of Fur Elise don't make people cry. Sometimes Horowitz can make you cry. E.g.,
https://www.youtube.com/watch?v=5r6UGPZJFwI&list=PLM_dZMdwru_RET8BZ1B6Zu6D-ZhcpUgQj&index=41

Well, I never got to developing Foundations of Piano Performance. What mainly happened is that after originally "deciding" that there is no point to using fingers on an acoustic piano any more, and bulling forward with further hyperedited electronic piano recordings, I realized that it was still important to have some fingers. For a lot of extra hyperediting is required if you start the hyperediting process with something raw or bad, compared to quite a bit less if you start with something not too bad.

So I went back to some practicing with actual fingers, and found that there was a sudden unexpected and unexplained jump in technical and musical competence. This continued with very modest amounts of practice (less than an hour a day, and not really every day) for some time. This continues to this day, although it is now accelerating and seems to have reached a clearly professional level.

Now what?

Now that I am almost 70, it is now high time to struggle to go for the top of live unedited piano playing. The plan is to reach the top by mid 2019, in terms of recordings. NOT the top overall, but the top in quality and creativity in a low quantity of spectacularly well known warhorses.

To achieve this, I must be fluent in the PIANO LANGUAGE. This is basically what is usually called "piano technique". You have to have your brain wired so that there is a completely faithful execution from the brain to the nerve bundle in the wrist(s) that emanates out to the fingers -

of the brain's conception of exactly how you want the piano to sound.

This requires an incredibly efficient use of finger, wrist, and arm joints, which must be exquisitely controlled in real time by the brain. The underlying mathematics of this efficient use seems like a rather incredible challenge to scientifically understand, and will certainly require high speed photography. Obviously, many details are going to depend on the individual's configuration, which differs from person to person. This looks like a very interesting and exciting scientific challenge.

Of course, this is just or "just" the Piano Language. Something not really accessible to normal people without millions and millions of keystrokes and 10,000 - 100,000 hours of thoughtful playing. For Piano Geniuses, a lot less time is needed to master the Piano Language. And what makes matters worse for the rest of us, essentially only a handful Piano Geniuses - and nobody else - really get very far in classical piano solo performance.

So I had "decided" that this is definitely not for me in my lifetime, being a comparative Piano Idiot all my life.

HOWEVER, strange events have taken over. To my great surprise, my control of the Piano Language has continued to accelerate for some years, with very modest practice - roughly on average one hour a day, with many days skipped. It has reached a point where I can play reasonably close to reliable perfection at least in the kind of warhorses that I am particularly interested in. I still could use some more perfection, but at my current rate of improvement, this will be easily achieved this year. Already, some - but not all - aspects of my piano technique are probably at least as good as anybody's on the planet.

Now what?

3. THE PIANO LIFE

This is where Foundational Thinking enters the picture.

It is important to distinguish between the Piano Language and the Piano Life. In the Piano Life, one is almost 24/7 practicing the piano. One is almost 24/7 practicing the piano IN YOUR HEAD, no piano in sight. At the high level,

this involves very detailed practice, the voicing of chords, detailed rendition of incredibly moving effects, and so forth.

This is the Conceptual Side. What do you want to hear? You perform in your head.

By the time I was about 50, I ceased being a Piano Idiot when it came to playing in my head. At some point, playing in my head became a matter of reacting to and making sense of the myriad of connections possible between musical patterns and phrases. For a typical short phrase with both hands engaged, there are perhaps 2^{100} different ways to play it. A typical foundational piano adventure is to take one of these iconic phrases in classical piano, and work out and classify maybe 100 meaningfully different ways to play it.

To digress, so what is it that I do when I think about issues in and surrounding the foundations of mathematics?

ANSWER. I say to myself, what new insight can I bring to this situation? What new patterns between the relevant components do I now see that I didn't before, or now see more clearly in order to make progress and shed new light on the situation? I particularly like to do this in arenas that have been thought - quite wrongly - to have been completely mined, where there isn't really anything new to say.

And so what is it that I now do when I live my Piano Life?

ANSWER. I say to myself, what new insight can I bring to this situation? What new patterns between the relevant components do I now see that I didn't before, or now see more clearly in order to make progress and shed new light on the situation? I particularly like to do this in arenas that have been thought - quite wrongly - to have been completely mined, where there isn't really anything new to say.

Over this year 2018, the my Piano Life should become a smooth integral part of my wider Foundational Life.

4. THE PLAN

So what is the plan? I have already turned my living room into a little bit of a functional kind of recording studio, with a go pro camera on the music stand. This is good enough for a good start. I will be making dozens, perhaps hundreds, of YouTube videos with me playing, live unedited, under the general description

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where I pick a short piece - sometimes a movement of a sonata - and work on it live unedited for maybe about an hour. Stopping and starting, to make it more brilliant or subdued or more likely to make you cry, etcetera. Maybe some verbal coaching, by my coach Friedman (me) - we'll see how that works out. Sometimes playing from start to finish.

The general idea is that you and I get to see me get deeper and more creative and better in real time over maybe about a year.

The YouTubes will be organized so that people can just listen to the best of the best if they want.

At some point I will want to get into Foundations Mode, where I will take some of these live unedited YouTubes and write a text document describing what I was thinking and doing and what is going on musically all through the piece, using time stamps. Sometimes this text document will be followed by an associated YouTube which illustrates on the piano piecemeal just what I was talking about in the text document.

Thus we have the concept of Performance Triple. An initial one hour or so video of the main kind, followed by an associated text document, following by another associated YouTube video.

With enough experience with these triples, I would hope to be able to get started on more direct Foundations of Piano Solo Performance. We shall see.

Will I arrive at the TOP OF PIANO according to plan, with limited quantity, of course? Well, that is the intention, and I really do always like to work with the IMPOSSIBLE.

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