MARCH 8 2022 2:36 PM ZULFIKAR MOINUDDIN AHMED RETURNS TO THEORIES OF HUMAN MOTIVATION

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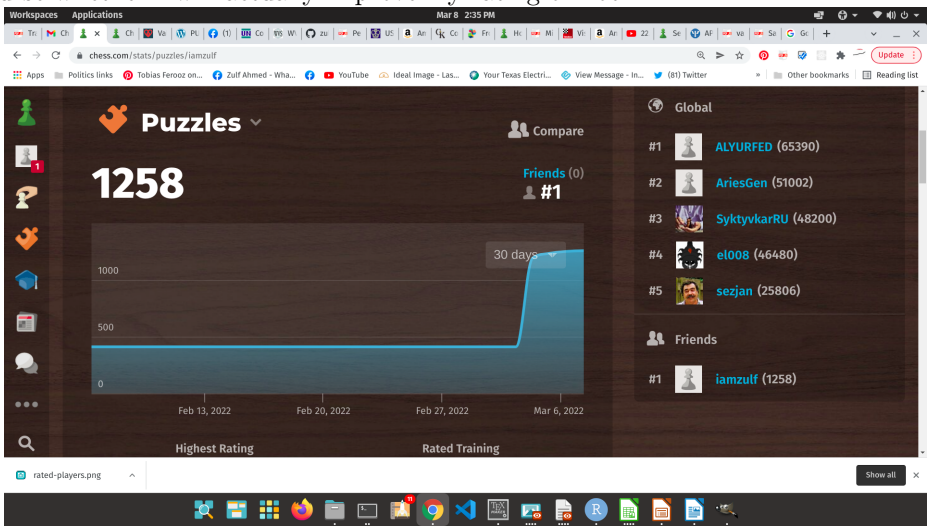
1. Chess Rating At 1258

I played a few puzzles quickly to regain Chess.com puzzle rating of 1258. This seems to be my current 'equilibrium level'. The question that is interesting is of course whether I will actually improve my rating or not.

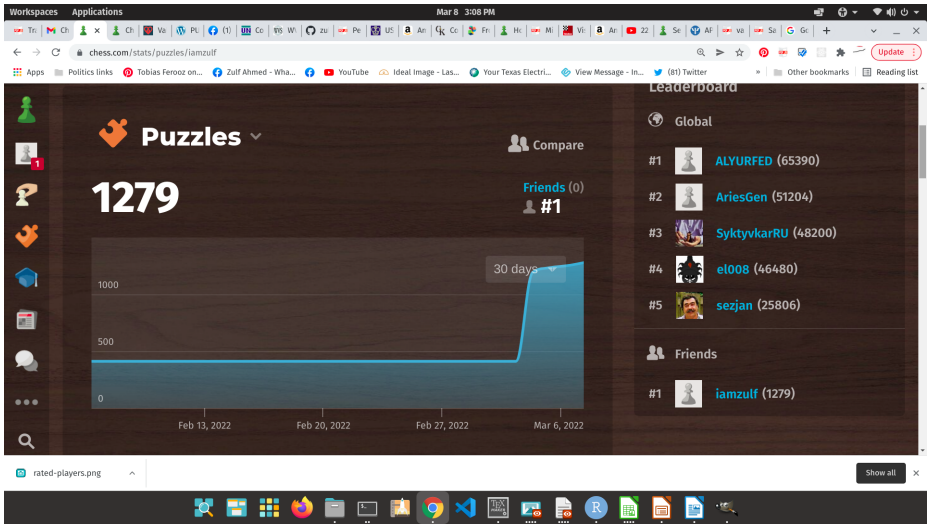


Now let me ponder some things here. Our general outlook regarding Universal Human Psychology is that all human beings evolved roughly 8 billion years away from the common ancestors with chimpanzees. It is known that G_c, a constant sequence of DNA letter pairs, the genetic code in common, accounts for 99.9% of all people's genome.

Since all people's psycho-physiological machinery is the same to 99.9% of genome, we all share many universal human features. In particular, therefore, Universal Human Psychology for Motivation for Action exists. Some of us uses the regular features of Universal Human Beings to practice and play chess. They are testing the universal machinery for motivation for action. Therefore, if we are able to produce quantitative models for chess rating as a function of practice , we will be able to generalise these models for all activities.

Date: March 8, 2022.

2. Fluctuations In Rating Levels



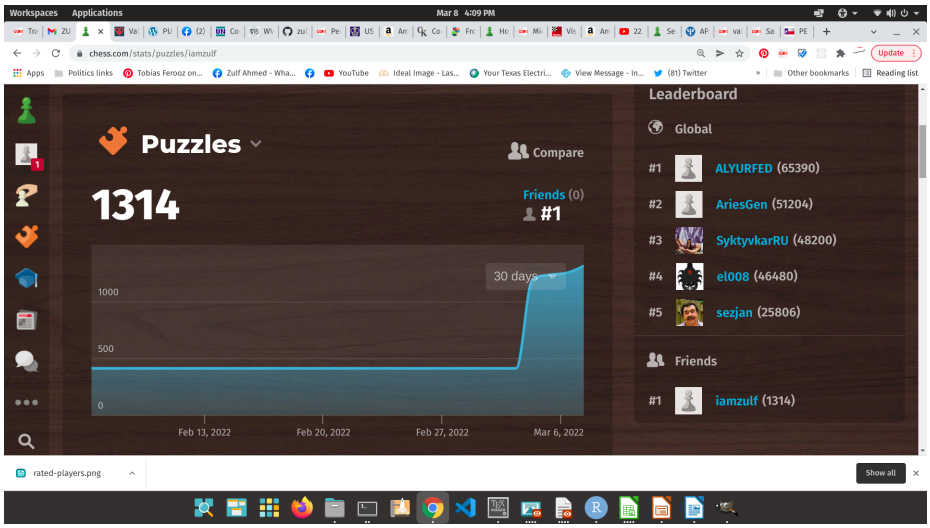
My chess rating fluctuates rapidly. We must first ask how to gain some handle on the fluctuations. The fluctuations are due to the variations of chess positions in the puzzles I attempt.

This is a truly marvelous example, chess ratings versus practice effort. Human variation is quite complex, and this is why Human Psychology is a difficult field for natural science. We have variations among humans, we have complexity of mysterious human physiology, and then we have variations of situations of the world. How do we manage to produce science in this extraordinary complexity in variation?

Chess is special because the total number of positions has 120 zeros. At the same time, even with this vast complexity, chess is a highly constrained situation. The rules of chess and pieces are extremely well-known to almost all people on Earth.

All other sorts of activities that we human beings engage in are more varied, and yet our motivation and learning in them is generally much less precisely measured compared to chess.

Therefore we want to estimate learning and motivation on chess, and then *generalise the quantitative models* and test them for *all other human activities*. We are optimistic that this will result in the most significant advance in Universal Psychology of Human Motivation in history of psychology as a natural science.



My ratings are a stochastic process in a way, as the puzzles are organised in Chess.com and they test different situations every time, and some I fail and some I succeed. For our purposes in psychology, they are sufficiently stable measurements.

Our goal is to model learning rate as

$$x = f(t) + \epsilon$$

where $f(t)$ is a smooth function of time and ϵ is sampled independently from a distribution on $\mathbf{R}$. We would love to do the following.

We would like to estimate $f(t)$ and investigate where $f(t)$ serves as universal learning rate for *any that have repeated effort by any human being.* This is our major hypothesis, that this path leads to quantitative understanding of Universal Human Psychology for Motivation and Action.

Our hypothesis is not well-defined in various ways. We do not specify how $f(t)$ determined, say, by chess learning rates for $N = 10,000$ people will generalise to other activities, such as law, or engineering, or cooking, or playing violin. However, we hypothesize that there will exist a parametric form

$$f(t) = f^*(t, \theta_0)$$

where varying θ will give us the learning rates of all activities in which human beings engage.

This is a hypothetical vision for scientific viewpoint that is not yet established. Today, the Psychology of Motivation is still in disarray and there are not many efforts at a Habituation view of Human Motivation and Action.

The benefits for success in this direction are vast, for today very bad ideas like IQ test results, are used indiscriminately to produce disastrous consequences for all sorts of people around the world.

This is a new direction for me as I have already enunciated some quantitative laws for Universal Human Emotions. Habituation is the main theme of my work on Universal Human Motivation and Action.

General action of all human beings is intractably vast, but *those activities that have habituation and repetitions might be tractable and besides, they are more important than idiosyncratic action* for a human science.

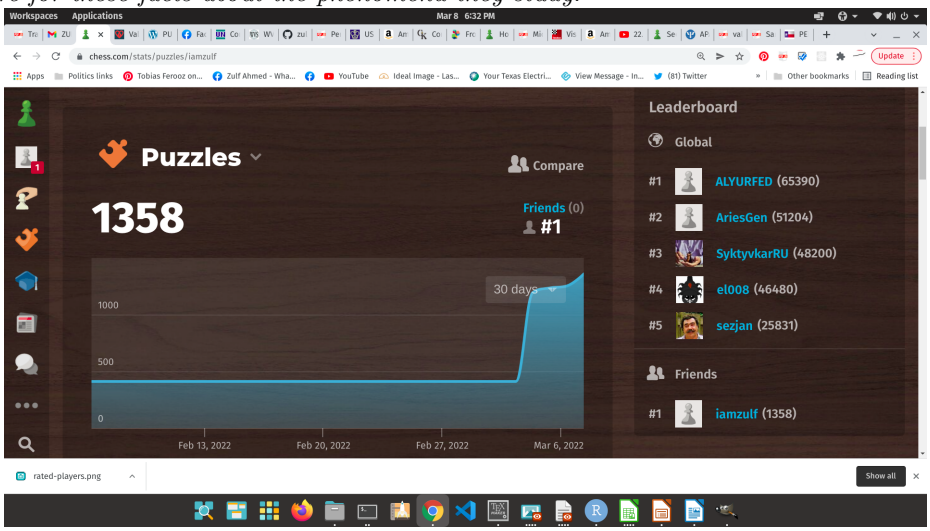
3. Questions Of Noise Verus Signal

I just reached 1323 chess rating.

When the phenomena we are attempting to understand is the human motivation and action by repetition of the activity *with variations in situations and many details* we will experience the possibility that the *stochastic noise* dominates the signal.

The phenomenon is extremely well-known in the models of fluctuations in the capital asset prices. They are also going to be prominent in Psychology of Motivation and Action.

What is important to understand are the following. These will be resolved with (a) massive measurements, and (b) sophisticated use of probability theory to formulate models. In Psychology, this was not so clear for a century, that the subject matter they engage in is *naturally* going to require (a) and (b). I wish to inform all Psychologists that progress in this field will not be *possible at all without care for these facts about the phenomena they study.*



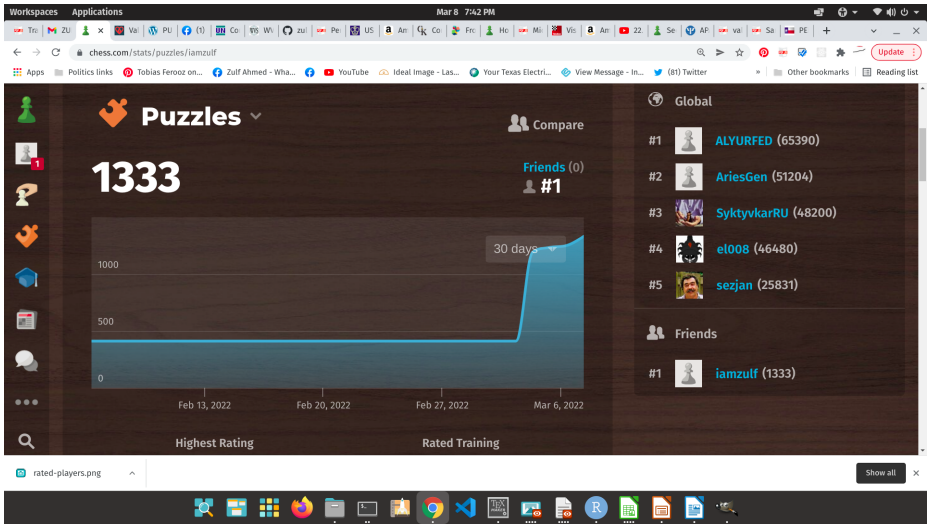
Now 1358 is likely to be close to a sort of equilibrium level for my chess abilities. Note that these are Puzzle ratings which may not reflect actual competitive chess ratings. Regardless, the effort here is to *pioneer* quantitative approach to Universal Human Psychology of Motivation and Action.

4. Habituation Theory Of Human Motivation

Producing a natural science of Man is beset with extremely difficult challenges. We believe that extant established theories are wholly inadequate for this. We believe that the arena of chess playing affords us to make progress on wider efforts to understand Universal Human Psychology of Motivation and Action and give sharper form for our scientific understanding of these realms.

While chess playing obviously differs from carpentry and legal work and violin playing and other sorts of things we human beings do, it has special properties that are attractive. It is much more careful in measurement of ability that most other endeavours, and our universality hypothesis allows us to begin to produce general quantitative scientific theories of Universal Human Psychology of Motivation and Action generalising from chess playing to all other arena of human activity.

5. Psychology Of Human Motivation And Noise



Suppose an arbitrary human $h \in \mathcal{H}$ with

$$|\mathcal{H}| = N_{humans} = 10^{10}$$

is engaged in an arbitrary activity $a \in \mathcal{A}$. How can we understand the Universal Human Psychology of Motivation and Action here?

We would want to know the (a) proficiency and competence level of h in this activity a, and so we would like. We are interested in

$$f^*(t, \theta_a)$$

in other words, the proficiency level of h for a after having experience for time $t > 0$. This is a basic sort of question to which a natural science of Man ought to be able to answer.

Perhaps we would like *predictions of the proficiency in the future* $T > t$ for h. This prediction would be

$$\mathbf{E}[f^*(T, \theta_a)]$$

the expectation of the future. The extant theory of Psychology does not have a clear framework that is established for these issues yet.

What I want to point out from a vast amount of experience in quantitative finance is that these sorts of models involve quite a bit of effort to extract models from levels of noise.

The intuitive sense for the trouble of noise is not part of the ordinary repertoire of psychologists yet who are qualitative and assume that simple statistics of correlations, means and variances will do. They will not do if any serious natural science is the goal.

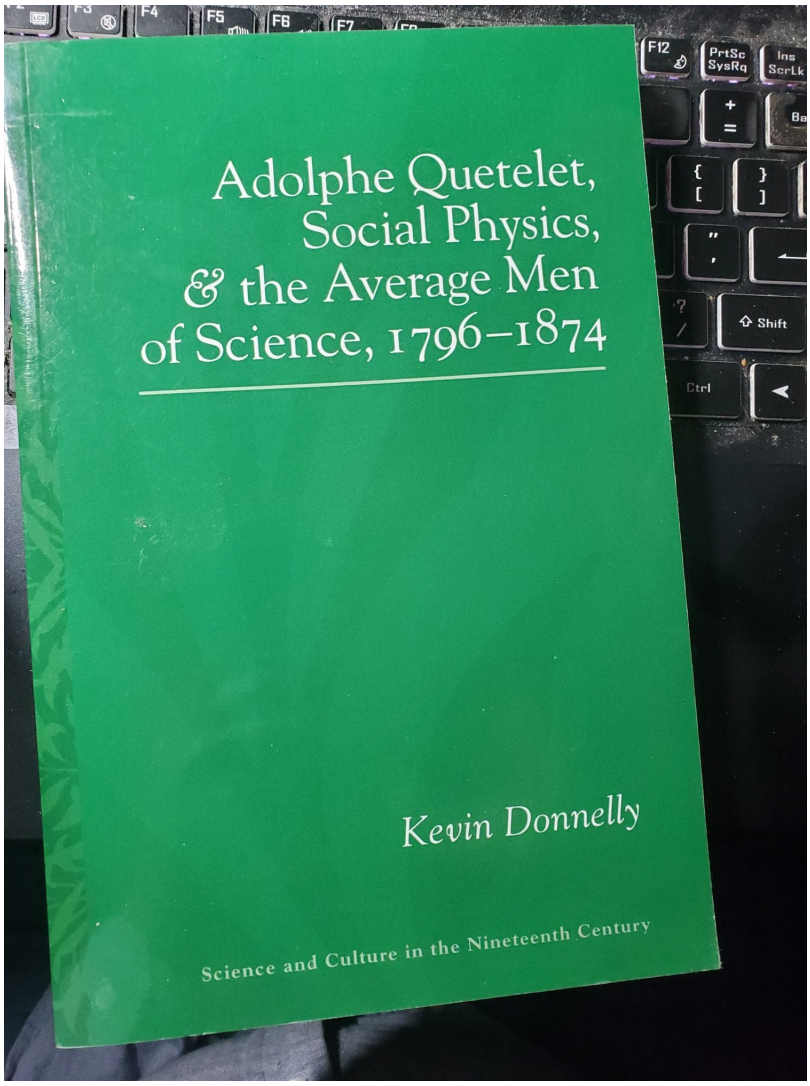
6. What Sort of Scientific Theories Survive?

The fundamental law of Nature I have personally named *Ahmed-d'Alembert Law* or S4 Electromagnetic Law after myself because Four-Sphere Theory is the Final Theory of Physics above $\delta = 10^{-15}$ cm. For this work alone I know with certainty of my *immortal genius*. I am far superior in my natural sense for Nature than even Richard Feynman.

The theories that have immortality in Science are maximally parsimonious and maximally accurate theories where *only the absolutely essential ingredients* appear.

What happened in the social sciences? Well these do not have the experience of the exact sciences.

Let me show you something.



Adolphe Quetelet lived 1796–1874. My reference is Percy Bysshe Shelley 1792-1824, so quite soon after the French Revolution.

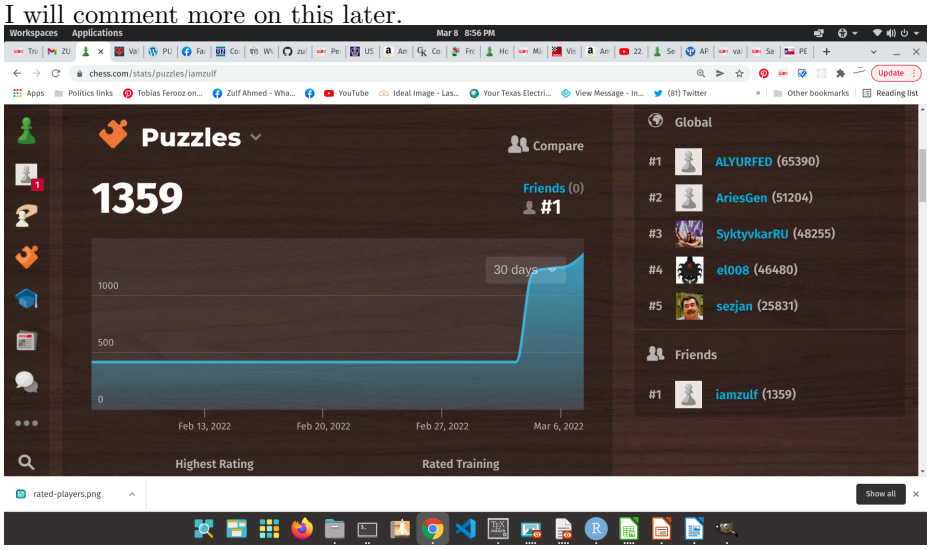
He worked on some foundational issues of Social Sciences from some demographic statistics, and of course experimental psychology did not exist before 1875 with William James at Harvard and 1879 with Psychological Institute of Wilhelm Wundt at Leipzig.

The importance of Natural Science of Man is, for me, not controversial at all. Psychology is extraordinarily necessary for all aspects of human flourishing. Indeed, I am influenced stronly by Martin Seligman and other positive psychologists who explicitly target human flourishing as an aim.

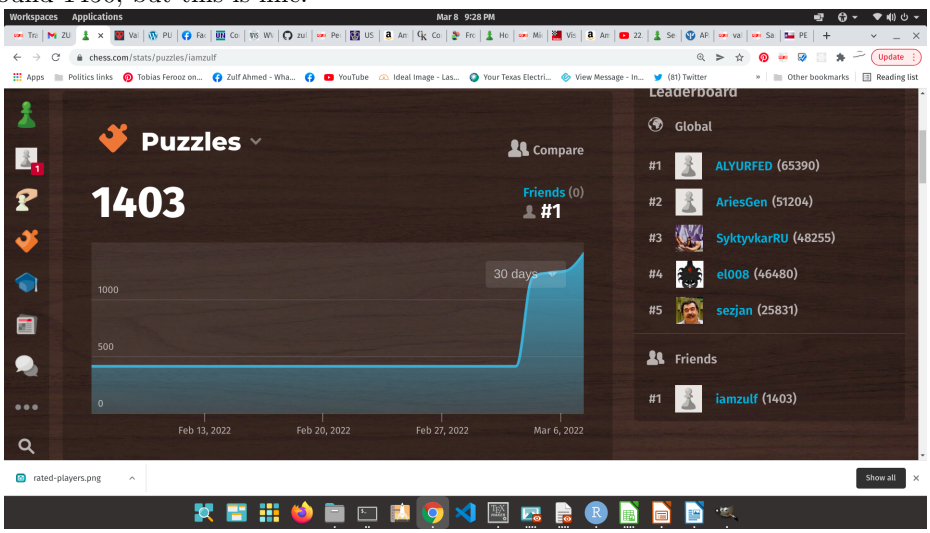
But Psychology is far from being an adequate Science today. The twin dangers of Psychology are (a) qualitative bullshit and (b) technical mumbo-jumbo. These together are the worst dangers to the survival of Social Sciences and Psychology.

You see in a sense, the entire twentieth century was a *pre-scientific age* for Psychology and Social Sciences because of a number of key elements missing. First, before we learned that G_c the genetic code in common was constant and accounted for 99.9% of the genetic code of all human beings, something that is solid knowledge now, there was confusion about whether Universal Human Psychology exists at all. These confusions can now be eliminated with extreme prejudice. There is no doubt that it exists.

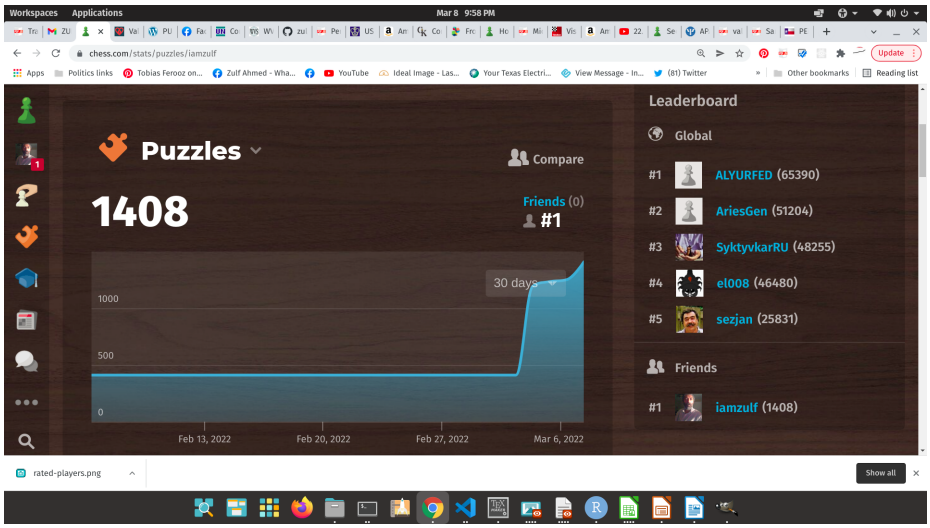
I will comment more on this later.



After a number of puzzles tried today, I see that my rating has reached 1359. This is closer to what I think is reasonable for me. I was hoping to be a bit better, around 1450, but this is fine.



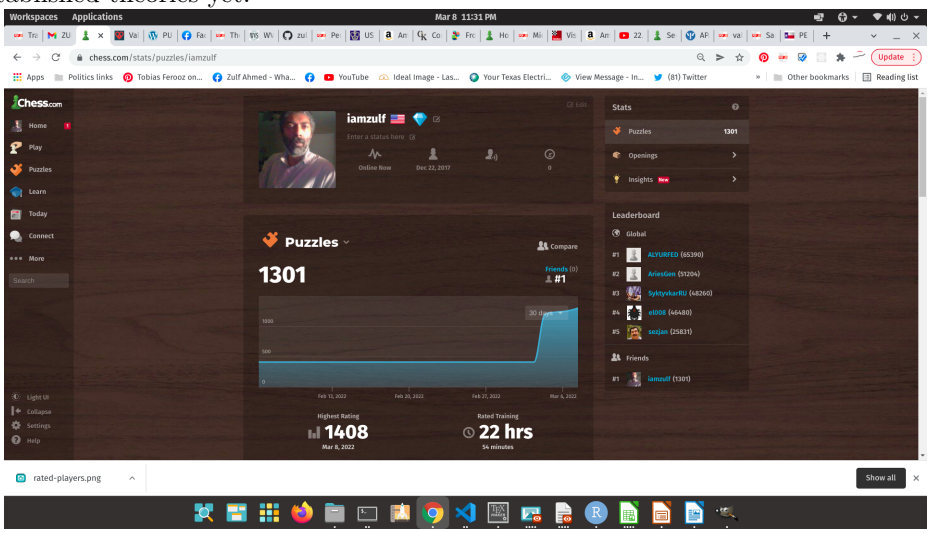
At 9:30 PM I manage to get 1403 on chess puzzles. This is slightly more respectable for me. I would like to have a real rating above 2200 at some point, but it is clear that this will require some years.



7. How To Mix Qualitative And Quantitative Sciences Correctly

The Human Race System is enormously complicated, and I personally am not opposed to qualitative methods in addition to quantitative methods. In many ways, there is much deeper knowledge available by qualitative methods. But the problem that occurs to me is that this mixture is extremely delicate business in psychology and social sciences.

The problem is, in a straightforward way, that of truth and its articulation. We have to prioritise natural science by precision of terms, and sound understanding of their match versus objective nature. And this is complicated by the mixing of qualitative and quantitative methods in a subject that does not have canonical established theories yet.



By 11:33 PM March 8 2022 I had lost 100 points to reach 1301 rating. And so we find that stability will only develop for chess ratings over longer periods of practice.

The important inference to be made here is that this sort of instability is not specific to either (a) chess and Puzzle rating of Chess.com; or (b) myself as a specific individual; or (c) specificity of the activity here which is chess competence. We are interested in learning something which is *independent of (a), (b), and (c)* as that is the interest of Universal Human Psychology of Motivation and Action.