

## Reflections of Judaism and Catholicism

If anyone really starts teaching my K-12 Economics (which mentioned Jainism), the year 13 curriculum about religion might have to include Judaism, Catholicism, and Buddhism; the first two were omitted to avoid bias.

When I mentioned, at the beginning, that her impressions should have been substantiated in a deeper way than a Marxist theory, that was dismissive. It is known that all of Marx' children perished as infants, and thinking at the time attributed to him, called Marxism, was really in his work a testament to the Jewish humanist tradition, only, and it is known also that somehow Marxism has failed.

Also, a colleague A. happened to say to me only two words, during a visit here, 'jewish lawyer.' It was in response to a story from America of a student suing her university because the course had included more depth than advertised.

My own parents' religion of congregationalism, which had been meant to be a nice compromise of episcopalianism and whatever was my mother's religion (she didn't ever mention what it was), is in the overview a sect of Judaism, as perhaps also Islam might be, I'm not sure, Dimitra would know more about the Ottoman empire, world history.

Anyway, let me choose as a starting point one example. The property surveyor for our house, I think that there is a possibility that he might be jewish. The only reason I say this (besides because of his name) is that after a few conversations his eyes changed, how they look to me. That is, I assume that people are jewish if, after a few conversations, their eyes seem to me to have two sparks in them. These sparks are absolutely always there, from then on.

What it meant is that in addition to having his property survey, I had him here in person, someone to talk with. After he left, he told me later, he had gone on a special visit to see a very important jewish lawyer, now retired, and to ask his opinion on the situation with my land.

I had lost my land, at least in my opinion this is when I lost it, at the moment when the road was privatized. It had been part of Crown Estates, and was sold to a private concern.

The surveyor told me that this very important lawyer said that the private sale did not violate any laws, but there is a civil matter. The civil matter is that the government may have had a duty to the purchasers of the road (who had approached the Treasury Solicitor to buy it, knowing that I depended on that road) to inform the purchasers that there is a person who had been walking on the road. That the purchasers should have a right to collect financial compensation now from the government, a partial refund of the purchase price.

What I was told about congregationalism, when I was a child, is that the old testament had been based on rules, on 'fire and brimstone,' a notion of 'hell,' and that this had seemed like a harsh, unforgiving, unkind book. But then Christ taught things, and one of the main things is that while murder is forbidden as a commandment, it is still possible to hurt people short of murdering them, and instead of trying to have a rule about it, Christ had invented some 'golden rules' which are more like guidelines, such as 'do unto others as you would have them do unto you.'

In K-12 Economics, I mention the 'big welfare hotels' near Columbia university, and I mention students being on welfare. I hope that this did not give the impression that I'd needed to be on welfare. The system there, for students, at the time, though, was nearly like welfare. Admissions requirements were easy, grades were not taken seriously (there was some funding requirement that grades are to be given, but they had no effect and were lost I think shortly after being given). There was what might be considered a jewish intellectual community which was part of the university too, and it was this which seemed to physically support the students.

An administrator called Francine would give us papers from the National Science Foundation and other organizations to sign. Sometimes they seemed to say we've been awarded various degrees (an MPhil etc etc), or that we've agreed to participate in some research project, but Francine would say "Don't read it! Sign it!" She was brusque and busy, she arranged that money was there for all the many many student stipends. This was with the blessing of staff members like Bers, Eilenberg, etc etc. She was not married, and there were jokes like Jacob would make, almost implying she was going to marry one of the many students she helps. One day there was a cake for Francine. I had asked, "Do all the secretaries get a cake on their birthday?" Francine had rescued me with her usual brusque personality, "I am *NOT* a secretary!" And Jacob had helped, "And furthermore, it is *NOT* her birthday." Her birthday was the subsequent day, a Saturday, and the our celebration was one day early, Jacob knew this. When I wrote about the 'big welfare hotels,' and about Marxism, I was not trying to imply that I'd been on welfare literally, but the same humanist ideal which underlies Marxism was there at the University too, and it had its origins in the Jewish intellectual tradition.

Scorcese's films about Italian communities try to explain some of the ideas of Catholicism, he said that 'Mean Streets' took 26 years to write. It starts with scenes of Harvey Keitel's young friend (the young DeNiro, acting well, as someone unstable, out of control, needing help), while the song 'be my baby' is playing, and the words are that instead of being devout in church, Keitel wants to really do good things in his life instead. It is about coercion and money, Keitel's uncle is just waiting for a guy's restaurant to fail, loaning him money, as the business partner commits suicide, the restaurant will be for his nephew, the young Keitel. The guys pretend they'll sell fireworks to some kids from New Jersey, but they just drive off with the money. Michael is worried that the young unstable DeNiro may not pay his debt, and a theme of the movie is Keitel trying to be responsible, trying to get DeNiro to understand his responsibilities towards Michael. Towards the end of the movie Keitel learns that Michael has been charging extortionate interest rates, and he stands by while deNiro abuses Michael verbally, insults him by giving him only ten dollars. Then Michael shoots both characters in a car.

The surveyor, during the discussions about tens of thousands of pounds value of my land, and many discussions, had said clearly, ‘My fee is seventy-five pounds.’ It was just very clear, we might be friends, but also there was an agreement, a business agreement between us. There was a very clear separation.

An example of the conflict between the two traditions is in the suicide of R Budd Dwyer. He had travelled to Poland, and seen how the government seems to have too much power, and people have so few possessions there. Dwyer said, he knew that communism is evil. His political views were based on defeating the evils of communism, he approved of prosperity and wealth.

His opponent was U.S. Attorney Dick Thornburgh, who, while probably not Jewish, is anyway a representative of the Jewish intellectual tradition. Later Thornburgh was director of the Institute of Politics at the JFK school of Government at Harvard, became a spokesman for civil rights, and received some recognition for his work such as 32 honorary doctorates.

What had happened is that an Italian computer guy, Torquato, in the tradition which Scorsese talks about, had wanted to be sure that a campaign contribution to Dwyer would really result in him getting a computer contract. He specifically had his lawyer say “So we’ll make the contribution and we’ll get the contract in return, right?” and Dwyer had said “That sounds like a good idea.”

Torquato was like the DeNiro character, unstable and unreliable, and he had just publicly boasted about bribing a government official, it had been in the newspapers.

While under investigation, Dwyer began to publicly talk about how his department had received, and rejected, a funding application for Thornburgh’s kids’ transport to a private school. He talked about how he had not appreciated the significance of this little slight. Dwyer spoke as though his prosecution was a ‘tit-for-tat’ attack, for not having funded Thornburgh’s kids enough.

In the dispute, Torquato's dad was a known powerful Mafia figure. When Torquato's lawyer was testifying against him, his family received death threats. While Dwyer assumed that the dispute was about Thornburgh's kids.

What Thornburgh and his associates wanted was something different, different than what Scorsese wrote about in Mean Streets (and what is involved in Clockers, a great movie). Something different than the fear that if you do not fund someone's kids, they'll do a political hit job on your career, for instance, as Dwyer explicitly talked about fearing from Thornburgh. Something different than the fear Torquato's lawyer experienced, when it was hinted that Torquato's father's Mafia connections may have consequences for the safety of his family.

This is something that felt a bit weird in the connections, in K-12 Economics, of notions of me being like a Dad to my students, or to students.

I did not mean it in the sense of 'going to bat' for them, standing up for them, in this Catholic, confrontational sense.

Throughout almost my whole life, there have been older and wiser guys there to comment so incisively and cleverly on my thoughts. This involves actually understanding my thoughts, which is a matter of decoding an incoherent, selfish exposition.

I think that the old testament just *assumes* that this level of kindness will be there.

If I just can jump now into another topic, it is that teaching is very different than appearing to be a good teacher. That, one role of a PhD supervisor, towards the end, is to disenchant the students with the teacher's brilliance somehow, by falling asleep, appearing incompetent.

Imagine if an assessment is done, by market principles, of the quality of teaching? It would say, 'In the last year, has your teacher done *this* or *this* well? And, for the most brilliant teachers, all the students would write, *no*. A successful PhD supervisor has his student despising his ideas, in the last year, feeling unsupported, let down, rejected, and disappointed.

Now, here is what I am going to say. That, there actually *are* recommended standards of K-12 education. But they are terrible. They are based in the Christian idea. But not the idea of kindness only.

The Christian idea is interpreted to mean that there is a notion of what kindness and goodness are, and the notion that the role of government is to incentivise the population towards this goodness.

Foundations such as the Gates foundation support this effort here. Instead of doing this, what the Gates foundation might consider is undoing some of the intentional damage that Microsoft has already done to society.<sup>1</sup>

Here are some excerpts from the actual K-12 Economic standards.

“Solve the following problem: your grandmother gives you \$30 for your birthday and you are trying to decide how to spend it. You are considering buying t-shirts (\$15 each), going to the movies (\$10 per ticket), or taking some friends out for pizza (\$7.50 per person). You do not have to spend all your money on one thing. You can use some money for one thing, and some for another. How would you spend your money to get the greatest satisfaction?”

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<sup>1</sup>The internet was conceived with an idea of a combination of shared information and private information. The things shared would be things like intellectual discoveries. The concept was invented so that chemists and physicists would all have a shared understanding. And things like email were private. These were things like sexual conversations between partners, say. Microsoft has throughout been structured on the possibility of corrupting the distinction. The 'windows explorer' was meant to merge into 'internet explorer.' Even now, 'windows search' includes 'search for people.' Computer viruses are entirely an outgrowth of the idea that 'windows' takes control of file associations, permissions, certificates, digital signatures. The user need not concern himself with that, and has no permission to concern himself with that. When DRM is written into the chip level, things will get very bad.

“Rewards are positive incentives that make people better off.”

“Penalties are negative incentives that make people worse off.”

“Both positive and negative incentives affect people’s choices and behavior.”

“People’s views of rewards and penalties differ because people have different values. Therefore, an incentive can influence different individuals in different ways.”

“List examples of rewards that are incentives for positive classroom behavior. ”

“Altruism

An important part of economic understanding is a recognition that people respond to incentives, both costs and benefits....seemingly altruistic behavior may be motivated by the expectations of feeling good about one’s self or deeds. If that is the case, the expected benefits may be greater than the expected costs and thus explain the behavior.”

“Responses to incentives are usually predictable because people normally pursue their self-interest or deviate from their self-interest in consistent ways.”

“Acting as consumers, producers, workers, savers, investors, and citizens, people respond to incentives in order to allocate their scarce resources in ways that provide them the highest possible net benefits.”

“Free trade increases worldwide material standards of living.”

“Competition among sellers results in lower costs and prices, higher product quality, and/or better customer service. When competition among sellers is limited, sellers have some control over the prices they set. ”

“The pursuit of self-interest in competitive markets usually leads to choices and behavior that also promote the national level of well-being.”

“The introduction of new products and production methods is an important form of competition and is a source of technological progress and economic growth.”

“Create a timeline showing notable innovation prompted by entrepreneurs, corporate research, and government programs and write a brief essay on their impact on economic growth, competition, technological progress, and job opportunities. ”

“More productive workers are likely to be of greater value to employers and earn higher wages than less productive workers.”

“The hope of achieving wealth can affect productivity by energizing people to work harder, while the hopelessness of escaping poverty can discourage people from trying. ”

“Entrepreneurs are individuals who are willing to take risks, to develop new products, and start new businesses. they recognize opportunities, like working for themselves, and accept challenges.”

“Technological change results from an advance in knowledge leading to new and improved goods and services and better ways of producing them. ”

“Behavioural Economics  
An evolving branch of economic thought merges economics with psychology to reconsider predictions of economic models on topics such as how individuals respond to economic incentives.”



“Benchmarks: Grade 12

Economic growth is a sustained rise in a nation’s production of goods and services. Long term growth in output results from improvements in labor productivity and increases in employment. ”

“Benchmarks: Grade 12

At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also that:

1. Markets do not allocate resources efficiently if: (1) property rights are not clearly defined or enforced; (2) externalities (spillover effects) affecting large numbers of people are associated with the production or consumption of a product; or (3) markets are not competitive.
2. An important role for government in the economy is to define, establish, and enforce property rights. A property right to a good or service includes the right to exclude others from using the good or service and the right to transfer the ownership or use of the resource to others. ”

“Benchmarks: Grade 12

A government policy to correct a market imperfection is not justified economically if the cost of implementing it exceeds its expected benefits.”

“Benchmarks: Grade 8

1. GDP is a basic measure of a nation’s economic output and income. it is the total market value, measured in dollars, of all final goods and services produced in the economy in one year.”

“Benchmarks: Grade 12

Monetary policies are decisions by the Federal Reserve system that lead to changes in the supply of money, short-term interest rates, and the availability of credit.”

The more one looks at the existing recommended K-12 standards, the more one realizes it is what students call ‘fucked-up.’

Externalities are ‘spillover’ which wastes efficiency? Including development of nature, chemical pollution, extinction? Really?

The definition of GDP for all countries has to be in US Dollars? Really?

Students are required to accept that there is a notion of “better off” and “worse off”? Really?

All those supposed ‘benchmarks’ are actually *assertions*, (which also by the way just happen to be contrary to fact). And how do you measure whether a student has reached such a benchmark?

How is the assertion that a government response to a ‘market imperfection’ is ‘not justified’ if it has too much ‘cost,’ meant to be a benchmark? It is nothing but a political doctrine, set up as a benchmark that has to be achieved.

How is the statement about when it is ‘important’ for governments to ‘exclude others from using a good or service’ supposed to be a ‘benchmark’?

The whole standard seems to be based on a moral underpinning about incentives and ‘goodness,’ the same as the coercion that Scorsese wrote so eloquently about in his criticism of Catholicism.

Now, a Jewish thinker is different, and one reason I was a little ashamed being caught out calling students my kids, is that there is something more universal, more wonderful, about the Jewish understanding.

I talked about this with A. All I said is that I've really hit Schroedinger hard on some technical points, and I want to be careful not to hurt Feynman. I don't know who mentioned it first, but we were talking about conservation of energy, and I was worried about Feynman, he pretends to be so modest. But he had said, 'in all our observations, we've never seen a counterexample to conservation of energy.'

A. was a little dismissive of my worries, talking about really a school notion, saying, he's probably just talking about how it's impossible to make a perpetual motion machine. And, he does not succeed in being modest.

Currently I am worried about how rotation fits into quantum mechanics.

I've realized that, whereas each fundamental frequency in the NIST database is absolutely denoted by one and only one representation of  $SU_2$ , or that one may objectively associate to each fundamental frequency a natural number of further magnetic lines it may be resolved into, determining ambiguously a pair of such representations in cases the 'spin' number is integral and unequal to 'angular momentum'; yet also that this  $SU_2$  is not the one whose maximal torus contains the letter  $L$ , usually denoted 'angular momentum.'

Rather, as  $L$  and  $S$  are in a maximal torus of the left and right factor of  $SU_2 \times SU_2$ , the vector field of rotations once lifted to the universal etale cover of the complement of the singular point in the coordinate system, includes  $\partial/\partial L + \partial/\partial S$ , involving both  $L$  and  $S$ . And one easy way to see it is that a semidirect product group  $SU_2 \rtimes SU_2$ , which happens to be isomorphic to a cartesian product  $SU_2 \times SU_2$ , acts as a group of symmetries of the Schroedinger equation plus electrostatic repulsion; it is larger than the rotation group. The rotation group is not concerned only with the leftmost factor, it is diagonal in the cartesian product, and if one ignores the line fibers it maps onto  $SO_3$ .

For cases when the space of wave functions happens to be multiplicity free (including all elements before Nitrogen), and when the electrostatic term is generic, there will be a bijection between a set of characters, isomorphism types of representations of  $SU_2 \times SU_2$ , and the eigenspaces of the electrostatic perturbation. However, really this refers to a restriction of what should be a global Schroedinger equation to a Severi-Brauer variety.

Once one has restricted to the diagonal  $SU_2$ , then there is a unique (up to a real scalar multiple and a phase angle) wave function of each energy level which respects each polarization, although there are wave functions corresponding to the same character which respect no polarization.

To understand a global version of the Schroedinger equation requires really understanding rotation.

What does Feynman have to say about rotation? I remember it, from reading his Berkeley notes when I was in high school. He addressed a question I had asked many times by then, why is there no analogue of Galilean relativity for rotations?

Feynman had written, "I just do not know."

Feynman's ideas having to do with the Lamb shift for Hydrogen ended up talking about transitions in space-time which are not restricted by event horizons moving at the speed of light only. Just as the restrictions of thermodynamics, against perpetual motion machines, are only for the combined effect, so the prohibition against things going faster than the speed of light, in Feynman's view, is something similar and only thermodynamic, not a principle of nature.

That is a problem with the "K-12 Economic standards." When I wrote that, I had been really joking. It really shocked me to find that it really does exist.

The notion of saying, "I just don't know," is a deeper notion than it seems. It involves understanding a context. There are always lots of things a person does not know.

To me, thinking now, if you take a rotating object, and just let it disintegrate into its particles, the as it were coreolis force will make the particles go their separate ways, usually in straight lines.

Feynman's work was to find the 'magnetic moment' of the electron. But in Stern Gerlach, one can interpret the magnetic lines as just a generalization of the ordinary spectral lines which one gets from a prism. And for a single electron, as is so well known, translational relativity means that we could have set up a magnetic field by particles just moving in parallel, which can be transformed by ordinary Galilean relativity to particles which are stationary. And where is the magnetic moment then?

There is nothing special about rotation that cannot be described as translation of course, in a field, or in a rigid body, or in relation with other things that are also experiencing what we interpret as translation.

Because of admitting not understanding rotation, Feynman admits not understanding magnetism, even while calculating this 'magnetic moment,' whatever it is, I do not know what he's talking about as I have not got that far along in my studies.

But my point is, that the existing "K-12 Economics" standards are a dogmatic religious doctrine. If people like Dwyer were worried that Marxism was essentially a religious doctrine, how would he see these standards?

Both are different than Feynman's understanding, where, the way A. explained it to me, at an instant, happily, he or any of the other physicists of any religion would abandon all their ideas. Surely the idea of a spinor field is going to be abandoned, and the idea that particles correspond to representations, the idea of an  $SU_3$  standard model, the idea of magnetism, all these will be abandoned, we all know that they are wrong ideas. A huge issue is what a young speaker said to me after his colloquium, 'Superposition has a long and distinguished tradition.' But addition of functions, being an invertible operation (having the opposite operation of subtraction) limits it too much to be meaningful. It was somehow connected with notions of probability, and here too, one has a falsely universal notion of probability, not a Bayesian notion, not a relativistic notion; and this becomes forced upon the student if one and all must agree that wave functions combine through superposition, through a shared notion of addition.

This same notion of addition, falsely supposed to be shared, is implicit throughout the 'K-12 Standards', and is forced upon any student who is required to meet its benchmarks.