Volume 10 | Issue 54 | Number 94 | Article ID 4701 | Dec 31, 2012

Gregg Levine Critiques Frontline Fukushima Documentary／グレグ・レヴィーン、最前線の福島関係記録資料を批判

Asia-Pacific Journal Feature

Between 2012 and 2014 we posted a number of articles on contemporary affairs without giving them volume and issue numbers or dates. Often the date can be determined from internal evidence in the article, but sometimes not. We have decided retrospectively to list all of them as Volume 12 Number 30 with a date of 2012 with the understanding that all were published between 2012 and 2014.

Asia-Pacific Journal Feature

On January 17, PBS documentary program Frontline ran a feature on the Fukushima nuclear meltdown entitled *Nuclear Aftershocks*. It is available online here. The show has generated buzz, but also drawn significant critiques. The most powerful criticisms come from author Gregg Levine, writing on the website my FDL. The review is reproduced below. Please view the original here.

Aftershocking: Frontline's Fukushima Doc a Lazy Apologia for the Nuclear Industry

By: Gregg Levine Friday January 20, 2012

There is much to say about this week's *Frontline* documentary, "Nuclear Aftershocks," and some of it would even be good. For the casual follower of nuclear news in the ten months since an earthquake and tsunami triggered the massive and ongoing disaster at Japan's Fukushima Daiichi nuclear power station, it is illuminating to see the wreckage that once was a trio of active nuclear reactors, and the devastation and desolation that has replaced town after town inside the 20-kilometer evacuation zone. And it is eye-opening to experience at ground level the inadequacy of the Indian Point nuclear plant evacuation plan. It is also helpful to learn that citizens in Japan and Germany have seen enough and are demanding their countries phase out nuclear energy.

But if you are only a casual observer of this particular segment of the news, then the *Frontline* broadcast also left you with a mountain of misinformation and big bowl-full of unquestioned bias.

Take, for example, *Frontline* correspondent Miles O'Brien's cavalier treatment of the potential increase in Japanese cancer deaths, courtesy of the former property of the Tokyo Electric Power Company (TEPCO):

> MILES O'BRIEN: When Japanese authorities set radiation levels for evacuation, they were conservative, 20 millisieverts per year. That's the equivalent of two or three abdominal CAT scans in

https://doi.org/10.1017/S1557466012016373 Published online by Cambridge University Press

> the same period. I asked Dr. Gen Suzuki about this.
>
> [on camera] So at 20 millisieverts over the course of a long period of time, what is the increased cancer risk?
>
> GEN SUZUKI, Radiation specialist, Nuclear Safety Comm.: Yeah, it's 0.2— 0.2 percent increase in lifetime.
>
> MILES O'BRIEN: [on camera] 0.2 percent over the course of a lifetime?
>
> GEN SUZUKI: Yeah.
>
> MILES O'BRIEN: So your normal risk of cancer in Japan is?
>
> GEN SUZUKI: Is 30 percent.
>
> MILES O'BRIEN: So what is the increased cancer rate?
>
> GEN SUZUKI: 30.2 percent, so the increment is quite small.
>
> MILES O'BRIEN: And yet the fear is quite high.
>
> GEN SUZUKI: Yes, that's true.
>
> MILES O'BRIEN: [voice-over] People are even concerned here, in Fukushima City, outside the evacuation zone, where radiation contamination is officially below any danger level.

There was no countervailing opinion offered after this segment–which is kind of disgraceful because there is a myriad of informed, countervailing opinions out there.

Is 20 millisieverts (mSv) a year a conservative limit on exposure? Well, the Nuclear Regulatory Commission says the average annual dose for those living in the United States is 6.2 mSv, half of which is background, with the other half expected to come from diagnostic medical procedures. And according to the International Atomic Energy Agency (IAEA), the maximum additional dose for an adult before it is considered an "unacceptable risk" is one millisievert per year.

Then, to assess the cancer risk, O'Brien, practically in the same breath, changes exposure over a single year to "over the course of a long period of time"–an inexcusable muddying of the facts. One year for those who must live out their lives in northern Japan might wind up seeming like a long period of time, but it would actually be a small fraction of their lifetimes, and so would present them with only a fraction of their exposure.

So, is Dr. Gen Suzuki assessing the increased cancer risk for 20 mSv over a lifetime, a long time, or just one year? It is hard to say for sure, though, based on his estimates, it seems more like he is using a much longer timeframe than a single year. But even if his estimate really is the total expected increase in cancer deaths from the Fukushima disaster, what is he talking about? Miles O'Brien seems almost incredulous that anyone would be showing concern over a .2 percent increase, but in Japan, a .2 percent increase in cancer deaths means 2,000 more deaths. How many modern nations would find any disaster–natural or manmade–that resulted in 2,000 deaths to be negligible? For that matter, how many of the reporters, producers or crew of *Frontline* would feel good about rolling the dice and moving their family into an area that expects 2,000 additional fatalities?

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Further, the exchange doesn't say anything about the person who is supposed to casually endure the equivalent of three abdominal CAT scans a year (something no respectable professional would recommend without some very serious cause). The effects of radiation exposure on children are quite a bit different from the effects of the same exposure on adults–and quite a bit more troubling. And young girls are more at risk than young boys. Though the *Frontline* episode features many pictures of children–for instance, playing little league baseball–it never mentions their higher risks.

Also missing here, any mention that in a country now blanketed north to south in varying levels of radioactive fallout, radiation exposure is not purely external. The estimates discussed above are based on an increase in background radiation, but radioactive isotopes are inhaled with fallout-laden dust and dirt, and consumed with food from contaminated farmlands and fisheries. Outcomes will depend on the isotopes and who consumes them–radioactive Iodine concentrates in the Thyroid and has a half life of a couple of weeks; Cesium 137 tends to gravitate toward muscle and has a half-life of about 30 years. Strontium 90, which concentrates in bones, lasts almost as long. The affect of all of this needs to be factored in to any estimates of post-Fukushima morbidity.

So, as one might imagine, Dr. Suzuki's cancer estimate, be it from his own deliberate downplay or O'Brien's sloppy framing, is widely disputed. In fact, a quick survey of the literature might call the estimate in *Frontline* an absurdly low outlier.

By way of example, take findings compiled by Fairwinds Associates, an engineering and environmental consulting firm often critical of the nuclear industry. Using data from the National Academy of Science's report on the Biological Effects of Ionizing Radiation (BEIR), Fairwinds explains that one in every 100 girls will develop cancer for every year they are exposed to that "conservative" 20 mSv of radiation. But Fairwinds believes the BEIR also underestimates the risk. Fairwinds introduces additional analysis to show that "at least one out of every 20 young girls (5%) living in an area where the radiological exposure is 20 millisieverts for five years will develop cancer in their lifetime."

It should be noted here that five years of 20 mSv per year would equal 100 mSv lifetime exposure–the newly revised lifetime maximum set by Japan after the start of the Fukushima nuclear disaster. And some cities in northern Japan, uncomfortable with this blanket prescription, have set limits for children at one millisievert per year.

None of this information was hard to find, and all of it stems from data provided by large, respected institutions, yet, for some reason, O'Brien and *Frontline* felt content to let their single source set a tone of "no big deal." Worried Japanese residents featured just after the interview with Dr. Suzuki are portrayed as broadly irrational, if not borderline hysterical.

The dismissive tenor of the medical segment carries over to several other parts of "Nuclear Aftershocks."

Take *Frontline's* assessment of the German reaction to the meltdowns at Fukushima

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Daiichi. Chancellor Angela Merkel's government has pledged to entirely phase out their reliance on nuclear power within the next decade. O'Brien call this decision "rash" and "hasty," and he doesn't qualify those adjectives as the viewpoint of one expert or another; instead, he uses them matter-of-factly, as if everyone knows that Germany is a nation of jittery, irresponsible children. The political reality–that the German government is actually pursuing a policy that is the will of the people–is treated as some sort of abomination.

Japanese anti-nuclear protestors get similar treatment from *Frontline*. That large demonstrations like those seen over the last ten months are a rare and special occurrence in Japan is not considered. Instead, the documentary, time and again, hints at a shadowy doomsday somewhere in the near future, a sort of end-of-civilization scenario caused by an almost instant cessation of nuclear power generation. Indeed, as the program ends, O'Brien declares that every nuclear plant in Japan will be shut down by May–and as he says this, the camera peers out the window of a slow-moving elevated train. The view is a darkened Japanese city, and as O'Brien finishes his monologue, the train grinds to a halt.

Ooh, skeddy. Was this *Frontline*, or *Monster Chiller Horror Theater*?

Yes, the end seemed that absurd. "Nuclear Aftershocks" paints a picture many members of both the nuclear and fossil fuels lobbies would love to have you believe: a sort of zero-sum, vaguely binary, cake-or-death world where every possible future holds only the oldest, dirtiest and most dangerous options for electrical power generation. You get coal, you get gas, or you get nuclear–make up your mind!

But the show, like the handmaidens of those out-dated technologies, perverts the argument by glossing over the present and omitting choices for the future. As much as many concerned citizens would like to see nuclear power disappear overnight, it will not. Germany is giving itself a decade, the US is looking to run its aging reactors for another twenty years, and even Japan, dream though they might, will likely not decommission every reactor in the next four months. There is a window–big or small depending on your point of view–but a decided period of time to shift energy priorities.

Even the nuclear advocates who appear on *Frontline* call nuclear power "a bridge"–but if their lobby and their fossil fuel-loving brethren have their way, it will likely be a bridge to nowhere.

"Nuclear Aftershocks" does mention Germany's increased investment in a wind- and solar-powered future, but the show calls that shift "a bold bet" and "a risk."

Likely the producers will argue they did not have time for a deeper exploration, but by allowing fissile and fossil fuel advocates to argue that renewables cannot meet "base load" requirements, while failing to discuss recent leaps forward in solar and wind technology, or how well Japan's wind turbines weathered the Tohoku quake and tsunami–or, for that matter, how much Japanese citizens have been able to reduce their electrical consumption since then through basic conservation–*Frontline's* creators are guilty of flat-earth-inspired editing.

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Indeed, missing from almost every discussion of the future of power generation is how much we could slow the growth in demand through what is called efficiencies–conservation, passive design, changes in construction techniques, and the replacement and upgrading of an aging electric infrastructure. The*Frontline* documentary highlights some of the potential risks of an accident at New York's Indian Point nuclear generating station, but it contrasts that concern with nearby New York City's unquenchable thirst for electricity. Missing entirely from the discussion: that New York could make up for all of Indian Point's actual output by conserving a modest amount and replacing the transmission lines that bring hydroelectric power from the north with newer, more efficient cable.

No single solution is a panacea for every region of the globe, but many alternatives need to be on the table, and they certainly ought to be in any discussion about the "aftershocks" of nuclear's annus horribilis. It should be seen as impossible to evaluate nuclear energy without considering the alternatives–and not just the CO2-creating, hydrofracking alternatives that are the standby bugbear of those infatuated with atomic power. Coal, gas, and nuclear are our links to the past; renewables and increased efficiency are our real bridge to the future. Just as it is dishonest to evaluate the cost of any of the old-school energy technologies without also considering environmental impact and enormous government subsidies–and now, too, the costs of relocating hundreds of thousands or millions of people and treating untold numbers of future health problems–it is also misleading to treat energy funds as permanently allocated to entrenched fuels.

The billions pledged to the nuclear industry by the Obama administration dwarf the budgets and tax incentives for conservation, alternative fuels, and green technology innovation combined. Factor in the government-shouldered costs of cleanup and waste storage, not to mention the sweetheart deals granted to the hydrocarbon crowd, and you could put together a program for next-generation generation that would make the Manhattan Project look like an *Our Gang* play ("My dad has an old barn!" "My mom can sew curtains!").

It is a grave disappointment that *Frontline* couldn't take the same broad view. The producers will no doubt argue that they could only say so much in 50 minutes, but like Japan, Germany, and the United States, they had choices. For the governments of these industrialized nations, the choices involve their energy futures and the safety of their citizens; for the *Frontline* crew, their choices can either help or hinder those citizens when they need to make informed choices of their own. For all concerned, the time to make those choices is now.

It is a shame that "Nuclear Aftershocks" instead used its time to run interference for a dirty, dangerous and costly industry.

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