

**Statements by Professor Niel Constantine and Professor Robin Weiss about the Misrepresentation of their Interviews in “House of Numbers.”**

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The sections on HIV antibody tests in “House of Numbers” contain fragments of interviews with a number of different people, put together in a way that confuses viewers rather than clarifying what HIV testing protocols are and how they work. The editing of the interviews to try to create doubts about the worth of HIV diagnostic assays is surely intentional. Questioning HIV diagnostics is one of the main tactics of HIV denialism.

The talking heads in these sections of the video include an eager-to-please but inexperienced woman working in a temporary testing tent in a South African mall, several legitimate scientists, and HIV denialist Liam Scheff and filmmaker Brent Leung. The section jumbles together bits of speech about the use of HIV antibody testing for *different purposes*—for screening the blood supply, for screening individuals for HIV infection and confirmatory testing, for diagnosis and for prognosis. It also scrambles remarks about *different generations* of tests; about tests of *different qualities*—those manufactured under FDA oversight and those produced in uncontrolled conditions; about *different types* of HIV antibody tests—conventional and rapid tests, ELISA and Western Blot; and about the use of these tests under *different countries’ government protocols*—Germany, South Africa, Britain, the USA. The resulting mess of words creates confusion – as it was intended to.

The history, variety, and protocols of HIV antibody testing can be confusing to non-experts. Leung and his team have exploited this in the film. But any of the legitimate scientists or clinicians in the film, asked a clear question by an ethical interviewer who would try to present their views accurately, could easily explain how HIV antibody testing works, what protocols are used to maximize accuracy in different places and at different times, the distinctions between screening and diagnostic assays, the differences between ELISAs and Western Blots, and so on. But Brent Leung sought to confuse, not clarify. He wanted to make it seem like the tests are unreliable and that the scientists he interviewed didn’t know disagreed with each other about HIV tests. The reality is very different. HIV antibody tests are extremely accurate, and various confirming protocols (two or three different types of tests) are used in different places.

Two scientists who were interviewed by Leung, then edited to appear as if they held antagonistic views, are Niel Constantine, Professor of Pathology at the University of Maryland, and Robin Weiss, Professor of Viral Oncology in the Division of Infection and Immunity at University College, London. Professors Constantine and Weiss both say that their interview footage as edited misrepresented what they know and what they said. In fact, contrary to the impression created in “House of Numbers”, they agree with one another about the nature, value, and accuracy of HIV antibody tests. Here are their statements.

**Dr. Constantine's Statement:** “What Mr. Leung has done is take our statements completely out of context. For example, he and I were discussing the use of rapid HIV tests and their accuracy. I explained that the tests were excellent, but that some individuals were assembling rapid HIV tests from individually purchased components and making these tests in their garages for sale. Such tests, that had not been subjected to the quality assurance measures required by organizations such as the FDA, were inferior and should not be used. That is, only tests that were approved by expert organizations should be used. Hence, my statement in the film “Now if I tell you that the test you took was lousy and didn’t mean a thing.” Mr. Leung used this to imply that I was stating that HIV tests were useless.”

-- Niel T. Constantine,

Ph.D., Professor of Pathology, University of Maryland School of Medicine

**Dr. Weiss's Statement:** “The sound bites were extracted out of quite a long interview with me and presented out of context. In my recollection (I don't have a tape of the interview) Leung was pressing me about HIV antibody tests in reference to screening blood donations. When I said ‘I don't think the Western Blot is a useful diagnostic test; I don't think it's worth doing’, I was referring to relatively high throughput screening for blood banks, and in the mid 1980s we did not yet have commercial dip stick Western Blot kits available. In retrospect, it would have been better for me to say: ‘I don't think the Western Blot was a useful primary screening test’.

“I also cited what I regarded as a dogma that a Western Blot test was essential as a confirmatory test; ELISA tests made by two different manufacturers can also provide a confirmed result. For instance, in some UK labs

the Wellcozyme ELISA using a competition format was used for primary screening and was then followed up with a confirmatory assay using the Abbott standard direct-binding ELISA instead of a Western Blot.

“It strikes me that similar false contrast and out of context quotes have been crafted together throughout the programme. Furthermore, Leung doesn't seem to understand or acknowledge that doubts about the precision or reliability of tests that were devised as research tools in 1984 (the first year in which we could grow HIV in reasonable amounts in the lab) really have little relevance to the reliability of subsequent mass produced commercial tests, which had to go through extensive quality control before they were marketed or used in clinics and blood banks. It's rather like saying that Roentgen's original fuzzy X-ray pictures are a valid reason for debunking today's radiological imaging systems for hospital diagnosis.”

-- Robin

A Weiss, Ph.D., Professor of Viral Oncology, Division of Infection and Immunity, University College London

**The following text is an annotated transcript of the sections of the video about HIV antibody testing, to provide a context for Professor Constantine's and Professor Weiss' statements. Annotations in italics.**

**Scene: Brent Leung is getting an HIV test in a South African mall.**

**African woman tester:** “We always say to our clients: even if you have tested here, you can go to other centers and go and verify your test. We cannot say you're 100%. Because you find clients going from area to area doing these tests, and they come with stories that I was negative at a certain area and positive with you.” *She seems to be talking about people who are HIV+ testing repeatedly at different sites in hopes of getting negative results.*

**Leung:** “And how do they decide if they are positive or negative?”

**Tester:** “We cannot tell, because we are using a rapid test.” *This answer doesn't mean the rapid test is useless, but that it requires confirmation.*

**Audio: Sinister background music.**

**Leung, narrating to impose a particular interpretation on the interview snippets:** “It occurred to me that perhaps the HIV epidemic is reported to be so widespread in South Africa and other poor nations simply because they use these inaccurate tests.”

Image: flooded African shantytown.

**James Chin, MD, MPH- Chief of Global HIV Surveillance World Health Organization 1987-92:** “There's the saying that if you knew how sausages, what sausages are made of, most people would hesitate to sort of eat them because they wouldn't like what's in it; and if you knew how HIV numbers are cooked, uh.. or made up, you would use them with extreme caution.”

*This is a completely different topic—how HIV statistics are estimated—but the insertion of this sentence here makes it seem that Chin is discussing HIV tests.*

**Caption: London, England. View of London, Thames from above.**

**Leung:** “I decided to investigate HIV testing protocols used throughout the developed world.”

**Harold Jaffe MD, Director, CDC AIDS Division 1992-95 Head of Public Health Dept. Oxford 2004-**

**Present:** “When we are testing people for HIV, the first thing we do is a screening test and it's usually a test called the “ELISA” *Jaffe's sentence is cut off here.*

**Niel T. Constantine PhD- Director, Clinical Immunology Institute of Human Virology:** “But there are also now available rapid assays that can be used as screening methods.”

**Liam Scheff, HIV denialist:** “Because they're faster, and we all know, faster and cheaper is more efficient.” *And people don't need to wait two weeks for highly accurate results. Is this bad?*

**Claudia Kücherer, MD, Molecular Biologist, Robert Koch Institute, Germany:** “If an ELISA is positive, it does not mean that the patient is HIV positive. So that's a problem.” *But what did she then go on to say as an explanation of this statement? We are not shown, as Leung only manipulates sound bites.*

**Robin Weiss PhD- Professor of Viral Oncology University College London:** “If we're using antibodies as a screening test to tell who is infected or not, uh, very occasionally you can get false positives.”

**Niel T. Constantine:** “So screening tests by themselves should not be used as a *definitive* measure of infection; that's why we use a screening test to pick up all the cases, but we use a confirmatory test to eliminate any *false* positives.”

**Back to the South African testing booth:**

**Tester:** “Take it easy... I'll pierce at the site.” *She pricks Leung's finger.*

**\*Leung [voice over]:** “It should be emphasized that most of the developing world uses only screening tests to confirm an HIV diagnosis; there are not confirmatory tests.” *Leung is presumably referring to the use of a second ELISA test from a different manufacturer, in contrast to a Western Blot, for confirmation. This is a highly accurate protocol and necessary where resources are limited.*

**Robert C. Gallo:** “This has a margin of error done properly that’s extremely low. In other words, it’s one of medicine’s better tests.”

**Robin Weiss:** “I don’t think the Western Blot is a useful diagnostic test; I don’t think it’s worth doing.” *See Dr. Weiss’s explanation of this sentence.*

**Niel T. Constantine:** “Did he give a reason? You know anybody can say anything, I think it’s stupid to drive a car. But come on you gotta give a reason!”

*In the background, Leung starts to say, “He said...”*

**Robin Weiss:** “It’s a useful prognostic test. Once you know that someone is infected, then you can follow their antibody responses well with Western Blots.” *This is a true, accurate statement.*

**Niel T. Constantine:** “I’d say he’s absolutely wrong, it has a complete usefulness.” *With what statement is Professor Constantine disagreeing here? The film doesn’t show*

*Footage pans backs and forth between the two men in a blurred, swinging motion, juxtaposing them to impose a sense of concurrency and argument.*

**Robin Weiss:** “You don’t need a Western Blot! And it’s become a dogma in HIV research that you need one ELISA followed by a western; you don’t. You need two different kinds of ELISAs made in two different formats.” *Professor Weiss here emphasizes the need for using two independent tests to obtain confirmation of HIV status. Most countries still use an ELISA followed by a Western Blot, a long established and highly reliable procedure. Professor Weiss simply says that there is an alternative method that could now be used and expresses his opinion that using two ELISAs is the better option.*

**Leung:** “Would you ever want to confirm somebody is positive using just ELISAs?”

**Claudia Koshered:** “No. Never. It’s not...It’s against the rules, it’s against the recommendations.” *In Germany, that is true, but not everywhere. Different nations make different decisions on many aspects of health care all the time.*

**Liam Scheff:** “It’s a turbulent sea of argument about how can we use this test, when can we use this test, why does this test have no standard?” *Tests made by different manufacturers are slightly different, and are read differently. However, all approved tests are very accurate. It is a profound logical error to say that if screening or measuring tests vary, the thing they screen for or measure does not exist*

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**Niel T. Constantine:** “Now if I tell you that the test you took was lousy and didn’t mean a thing, would that make any difference for everybody to hear?” *See Dr. Constantine’s statement about the proper context for this comment: he is referring to bootleg tests that are not reliable.*

**Leung:** “It’ll make a difference for me.”

**Niel T. Constantine:** “Yeah I know.”