

## Attractive theory is not enough

### **The Origin, Persistence and Failings of HIV/AIDS Theory**

Henry H Bauer

ISBN-13: 978-0-7864-3048-2, 296 pp

Jefferson, North Carolina: McFarland, 2007

US\$35.00, Paperback

### **The Invisible Cure: Africa, the West, and the Fight against AIDS**

Helen Epstein

ISBN-13: 978-0-374-28152-6, 352 pp

New York: Farrar, Strauss & Giroux, 2007

US\$26.00, Can\$32.95, Hard cover

### **The AIDS Pandemic: The Collision of Epidemiology with Political Correctness**

James Chin

ISBN-13: 978-1-84619-118-3, 230 pp

Abingdon, UK: Radcliffe Publishing, 2007

US\$39.95, £27.50, Paperback

In science, facts can sometimes be ugly, especially when they undermine an attractive theory. Just as there are people who have difficulty accepting stubborn facts, there are people who have difficulty distinguishing theory from fact. This is illustrated by the recent simultaneous publication of three books about the global AIDS epidemic: Henry Bauer's presentation of data, that, he claims, point away from HIV being a transmissible infection or the cause of AIDS and its epidemics;<sup>1</sup> Helen Epstein's journalistic overview of AIDS in Africa and its (in her mind) no-brainer solution;<sup>2</sup> and James Chin's dissection of the corrosive effect of political considerations in the objective assessment of the global AIDS epidemic's magnitude and direction.<sup>3</sup> If (to paraphrase the opening of *Anna Karenina*) 'all strong science is alike and all weak science is weak in its own way', then each book can be used as a mirror for some of the major failings of HIV epidemiology during the first-quarter century of its existence.

Bauer's views are essentially Duesbergian and perhaps best summarized by himself: 'That HIV does not cause AIDS is demonstrated by the fact that HIV and AIDS are not correlated chronologically, geographically, or in their relative impact on men and women and on people of different ancestries... What HIV tests detect is evidently not something transmitted sexually... A positive HIV test can be stimulated by a wide variety of conditions (e.g., pregnancy) and agents (e.g., malaria, syphilis)...' (Bauer<sup>1</sup>, p 245). Here is not the place to argue the (de)merits of these profoundly unorthodox views, but rather to point out the weaknesses in the strength and quality of the evidence used to buttress them. Not only does Bauer ignore contrary

evidence but he also selectively interprets the observations of others. Even if this criticism were inaccurate, it remains true that his conclusions are principally based on ecologic evidence and inferential reasoning. And while such tools are necessary investigatory instruments, they are, because distant from realities on the ground, insufficient to convince. Comprehensive collection of more direct empiric data is needed to generate confidence in the 'true' epidemiologic picture. Extraordinary claims require extraordinary evidence and, in my estimation, Bauer's richly documented (for a popular book) presentation fails to deliver.

Failure to deliver convincing evidence also applies to both Epstein's and Chin's assertion that what is driving the HIV epidemics in Africa is sexual concurrency, especially the variety claimed by some to be common in Africa (long-term, rather than casual, overlapping partners). Neither book mentions that the (admittedly) modest empiric evidence from sub-Saharan Africa<sup>4</sup> has failed to support this strongly held (especially by Epstein) belief. Indeed, although the importance of concurrency in the transmission of bacterial sexually transmitted infections has received solid empiric support,<sup>5</sup> including in Africa,<sup>6</sup> and although it is true that concurrency has been shown by mathematical modelling to be capable of amplifying sexual transmission by as much as a factor of 10,<sup>7</sup> this attractive theory has yet to receive empiric support from HIV transmission studies in Africa. Nevertheless, both Epstein and Chin assert its validity, apparently unaware that models are not intended to provide answers, but to point the way to factors that may be important in disease transmission. Only comprehensive empiric data can provide the reliable evidence that such a confident assertion requires. I say 'comprehensive' because neither Epstein nor Chin consider the mounting evidence that a significant portion of HIV transmission in poor countries is associated with non-sexual exposures (e.g. via contaminated sharps). In neither of their books, for example, is there any reference to the considerable amount of work that has appeared in the literature questioning the magnitude of the contribution of sexual transmission to HIV epidemics in sub-Saharan Africa. That this is a deliberate oversight cannot be doubted: Gisselquist and colleagues, as well as several other independent researchers, have published no fewer than three dozen articles and three dozen Letters to the Editor in refereed journals since 2001 about non-sexual transmission of HIV in Africa. And although Bauer alludes to this work, he selects the one which supports his view and ignores its larger implications, probably because the work of Gisselquist and colleagues acknowledge the communicability of HIV both sexually and via blood exposures.

Each of the three books has redeeming features: Bauer's for asking good questions and for detailing how 'competent and qualified people who questioned the orthodoxy have been largely excluded from the leading journals' (Bauer<sup>1</sup>, p 157) and, consequently, the media; Epstein's for

her experiences in Africa and Chin's for his frank discussion of how powerful health bureaucracies, particularly The World Health Organization and The Joint United Nations Programme on HIV/AIDS (UNAIDS), spin numbers and promote self-serving epidemiologic assessments. No one reading Chin's assessments should ever again uncritically accept official HIV/AIDS estimates. Erosion of the public's trust in official data could be the lasting contribution of Chin's book. Yet, what concerns this reviewer the most is the likely unchallenged acceptance of Epstein's and Chin's answer to 'Why Africa?' (long-term concurrency); in neither book is it clear that the evidence for this belief is theoretic and not empiric, nor do they provide the reader with the wherewithal to distinguish interesting theory from hard fact. The 'invisible cure' Epstein proposes - discouraging long-term sexual concurrency among sub-Saharan African adults - suffers from a serious case of 'invisible (or, at least, insufficient) evidence'.

These three books can actually serve as a mirror for HIV/AIDS researchers and health workers who should take a hard look at the weak quality of evidence supporting the views of HIV propagation appearing in their pages. As Chin says: the road is littered with 'many "glorious myths" and misconceptions UNAIDS and AIDS activists continue to perpetuate' (Chin<sup>3</sup>, p vii), a view Epstein shares: 'In the pages of academic journals, theories about the mysterious concentration of AIDS in Africa sprang up and faded year after year' (Epstein<sup>2</sup>, p 51). Amen. It is simply astonishing that, a quarter of a century into the HIV/AIDS epidemic, ecologic evidence, inferential reasoning and mathematical models have served as the (largely, sole) basis for assessing HIV transmission dynamics and, hence, for recommending interventions. Thus, many of these latter are seemingly based on myths, misconceptions and (unproven) 'theories'. For a microbe that is transmitted person-to-person, the tracing of infected persons and their exposed (via comprehensive assessment of sexual and puncturing exposures) partners should be the standard for trustworthy evidence for elucidating HIV transmissibility and community patterns with confidence. Without such direct evidence, especially in light of the multifarious anomalies noted,<sup>8</sup> we remain prisoners of opinion and speculation, much of

which has consisted of 'epiganda' (Gisselquist's contraction of 'epidemiologic propaganda', a word that could have accurately served Chin's purposes). Connecting the dots on the ground rather than simply in the mind is what constitutes the most valid evidence. Readers should ask the HIV/AIDS establishment, especially the health agencies entrusted with monitoring and intervening in HIV epidemics, why they have settled for evidence from a lesser god when the stakes for getting the picture right are so high. Bauer, Epstein and Chin ought to be thanked for providing us with such a (regretfully unflattering) mirror. Our task ought to be to recognize the serious weaknesses in the available evidence and to insist on rigorous studies that can supply the strong, direct evidence needed for epidemiologic validity.<sup>9,10</sup>

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