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13th ICOLD. Q.51: discussions. New Delhi, 1979. v.5, p.666

29 - Victor F. B. de MELLO (Brazil)

Regarding reservoir induced seismicity the disparities of positions between experienced dam engineers and keen students of dam engineering appear to be so erratic that I would venture the statement that rather than there being a problem of induced seismicities, there is the problem of the presumed problem of such seismicities. Whenever the problem becomes more real to a Society, it becomes tangible, definable and attackable : the very fact that it persists as somewhat intangible establishes the relative worth, such as, for instance, was the question of tuberculosis compared with the common flu.

Surely we all know that there cannot be a change of stress states without some accompanying straining and energy liberation (infaillibility of cause-effect concept) : however, since infinite parameters are always at play, as Engineers we seek to sort out in order of priority those that merit the expense.

It would take a full paper to discuss point by point the many technical fallacies that are being repeatedly transcribed in this multidisciplinary no-man's land. I therefore limit myself to an overall preoccupation.

I have accompanied with considerable dismay the great efforts that are being expended chaotically in studies, instrumentation and monitoring, and pseudo-interpretative reports, in this connection : and am especially concerned at the burden they have wrought on so-called developing countries and their projects. The situation seems analogous to that or orphan children being raised by grandparents : they are deprived of the priviledge of evolving with simultaneous interplay of knowledge and wisdom-acquisition, from the growing together with the stature of their own problems, because they acquire prematurely their grandparents' probelms. Tripping and falling is never a problem to a ductile child, but can be very much of a problem, both physical and mental, to an embrittled grandparent.

Are the developed engineering groups that export their knowhow hoping to solve some of the latest questions of their « international don't know », through monitoring in projects of developing regions, what they themselves never monitored (with no known penalty) while they themselves grew? After all, has induced seismicity, and microseismicity, anything to do with the strongmotion seismicity that is of real concern to engineering projects? Why was not such a recent dam as Teton monitored for induced seismicity? I might have given singular information, considering the very rapid filling and emptying. What were the induced seismicity data on all the big projects in California, Switzerland, Italy, and so on? And right nearby this conference venue, what were the induced seismicity behaviours at Mangla and Tarbela?

I strongly appeal for urgent publication of all data available, with no despising of negative data : the dominant working hypothesis of quietude as a civil engineering back ground must be restablished so that exceptions may be detectable for design predictions and decisions.