

On hygiene, intellectual and otherwise

The purpose of this short talk is to help you understand the world we live in, the world that some people honour with the adjective "real". The reason to present it is that I observed at the two discussions earlier this week a general uneasiness as to whether what we are doing really makes sense. We know that no responsible scientist guesses his formulae but derives them and in the same vein we derive our programs by formal calculation. This is a time-honoured tradition, formalization is just a matter of intellectual hygiene, and we should be quite confident that, indeed, this undertaking makes all the sense in the world, but we hesitate and are ambivalent about it because, all around us, our hygienic practices are opposed, derided, and ridiculed. For your illumination and comfort I would like to point out that exactly the same opposition was evoked a century ago when it was suggested that surgical cutlery such as needles, knives, and scissors be sterilized by putting them in boiling water. The opposition was as violent as the hygienic practice was sensible.

Medical science had an irrefutable argument against it: sterilization of surgical cutlery would

have no beneficial effect at all because, if it had, the practice would have been introduced a long time ago. After all, boiling water was already available at the time of Hippocrates.

Medical research was a little bit more tolerant in the sense that they admitted that, yes, perhaps some of such hygienic practices could be allowed in the case of novice surgeons, whose work was anyhow confined to toy operations. Research, however, would not pursue it since it was ridiculous to believe that the sterilization of their cutlery would enable surgeons to cure all diseases.

Strong opposition came from the surgeons themselves. The Royal Surgical Society even issued a strongly worded Manifesto against sterilization, arguing, firstly, that imposing such artificial disciplines in the operating rooms would stifle the surgical creativity of its members, and, secondly, that, if sterilization of the knife really helped, everybody would be able to operate and that would be totally intolerable. Furthermore, what was then known as operational research had shown that the proposed sterilization procedures would be much too complicated for the average nurse.

Emotional protest came from the nurses themselves, who loved to take care of the very sick and whose devotion rose in those days to unfathomed heights each time a young patient died in their arms. The spectre of routine operations was a threat to their job satisfaction, greater than they could endure.

Next, the Department of Defence declared a moratorium on all funding of sterilization research, frightened as it was of the possible outcome of being obliged to equip all its field hospitals with the necessary boiling equipment. Needless to say, the thought of having to subcontract the design of a portable boiler was more than the DoD could endure. For years, medical researchers applying for funding had to sign a form on which they declared that their research could not be used to foster the case for sterilization of surgical cutlery.

Eventually, emotions ran so high that the Church could not remain silent any longer. It settled the matter on moral grounds: since it is Man's predicament to die, it would be immoral even to try to reduce the natural mortality rate of the

surgical wards by such unnatural and counterintuitive acts as boiling a pair of scissors: the sole purposes for which God had created hot water were the cooking of food and the boiling of heretics such as the practitioners of greater hygiene, be it surgical or otherwise.

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