

slime molds, he says 'we still need a field guide to the cellular slime molds and should keep the old system of morphological classification alongside the molecular phylogenetic tree. Both are needed' (p. 20). While pointing out the surprising result that the 'elegant architecture and [those] other features of the two species of *Polysphondylium* namely *palladium* and *violaceum*. . . have been invented independently twice at different times, perhaps many, many years apart', he cautions that, 'the relation between these two species is based on only two genes, and it will be important to examine their differences involving more genes' (p. 21). While discussing the absolutely fascinating results showing cheating in chimaeric fruiting bodies in laboratory experiments, Bonner plays spoilsport by concluding with the cautionary note, 'It is important to know if these interesting cheaters exist in nature' (p. 30). After reviewing recent molecular studies, he cautions by saying 'However, it is difficult to see how all these activities at the level of cells could lead to the formation of a new species' (p. 32).

In his review of this book in the *Times Literary Supplement*⁶, Lawrence Hurst laments that 'The old-school classical biologists, such as Bonner, who really understand their organisms may well, like the slime mould's supporting cells, find themselves without a future', because 'Discovery via high-throughput data generation is now the order of the day . . . and it looks set to soak up the big research money for a while yet. But with this approach, carefully considered hypotheses, simple elegant experiments and a feel for the organism tend to be lost by the wayside.'

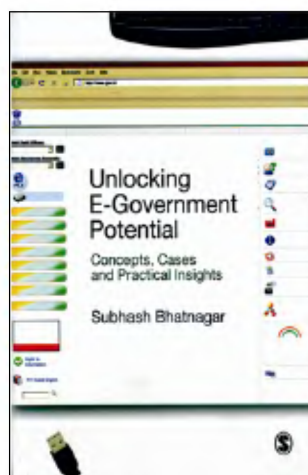
Hurst's pessimism may well be justified if scientific research is limited to well-endowed laboratories in the developed world. If less well-endowed laboratories in the developing world were to pick up the gauntlet however, I see more room for optimism because when you do not have money for high-throughput research, you have no option but to resort to 'carefully considered hypotheses, simple elegant experiments and a feel for the organism'. And Bonner would have made no small contribution to make this happen.

I thank the Wissenschaftskolleg zu Berlin for expert bibliographic assistance and for providing as conducive an atmosphere for the pursuit of scholarship, as can be imagined.

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Unlocking E-Government Potential: Concepts, Cases and Practical Insights. Subhash Bhatnagar. SAGE Publications, New Delhi 110 044. 351 pp. Price: Rs 450.

Computers were used by several state governments in India as early as the 1970s. In fact a Government Computer Centre was set up in Karnataka in the late 1970s which was primarily used for payroll calculations, budget preparation and tabulating the results of examinations such as SSLC. The whole scenario changed in the mid 1990s, with the advent of low cost personal computers (PCs) and the networking of computers brought about by improvements in Com-

munication Technology. Information and Communication Technology (ICT) combined and resulted in Local Area Computer Networks (LANs) and subsequently the Internet. The emergence of the Internet and the world wide web led to the development of e-commerce. E-commerce is primarily concerned with the sharing of business information, maintaining business relationships and conducting business transactions using computers and telecommunication networks. Several terms such as Business to Customers (B2C), Business to Business (B2B) and Customers to Customers (C2C) e-commerce appeared. Subsequently, government also saw the potential of using ICT and the technologies developed for e-commerce such as design of websites, portals, web-based transactions, secure communication technologies and digital signature in their operations. These technologies began to be used for carrying out transactions between citizens and government (C2G), Business and Government (B2G) and among Government departments (G2G). There are several definitions of e-government and there is no single generally accepted one. A simple definition would be the use of ICT to integrate and improve transactions between government and citizens, businesses and public institutions. The author of the book being reviewed perceives it as 'E-government is about a process of reform in the way governments work, share information and deliver services to external and internal clients. Specifically, e-government harnesses information technologies (such as wide area networks, the Internet and mobile computing) to transform relations with citizens, businesses and other agencies of the government. These technologies can serve a variety of ends: better delivery of government services to the citizen, improved interactions with business and industry; citizen empowerment through access to information or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth and/or cost reduction'. Several state governments have implemented e-governance projects. A notable one is the *Bhoomi* Project of the Government of Karnataka which issues document called record of Rights, Tenancy and Crops (RTC) to farmers. This document is used by farmers for several purposes such as getting bank loans, crop insurance, etc.

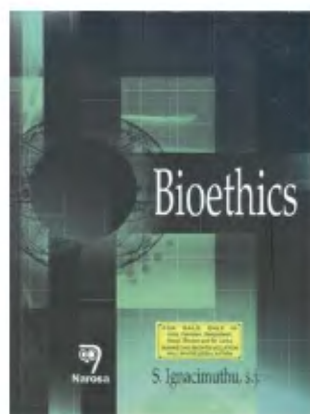
The *Bhoomi* project has also streamlined mutation of land records when ownership changes. Initially records were issued in 203 taluk offices on payment of a fee of Rs 15. Currently RTCs are available at Internet Kiosks being set up in rural areas. This is one of the success stories of C2G project. Other success stories are registration of urban properties in Karnataka, Maharashtra and Andhra Pradesh, providing services such as bill payment of utility bills, property taxes, traffic fines, obtaining birth and death certificates, etc. through projects such as e-seva of Andhra Pradesh and Bangalore-One in Karnataka. The spread of e-government projects has not been uniform in all the states of India. The projects which have been successful are the ones where there was political will at the highest level in the state for reform and some young and energetic administrative service officers who took up ownership of the projects and implemented them successfully. An interesting point brought out by the author who has meticulously studied several e-government projects is the fact that the level of corruption has not significantly reduced in many of them. In fact, if reduction of corruption is stated as an objective of an e-government project, it has little chance of success due to vested interests. Successful e-government projects have reduced the time spent by citizens to get the service and citizens obtaining clearer and correct documents. Further, the benefits which accrued in several projects far outweighed their cost.

The author of the book, Subhash Bhatnagar, has several years of experience in IT as a Professor at the Indian Institute of Management, Ahmedabad where he coordinated the activities of a Centre for Electronic Governance which carried out research in this area and trained a large number of state government officers. He was also associated with the World Bank and studied several e-governance projects in developing countries. A valuable aspect of the book is the deep insight he provides on the need to re-engineer existing government procedures and often change some current laws for successfully implementing e-government projects. The book also brings out the advantages and disadvantages of public-private partnership in implementing e-government projects. Of special value are the detailed case studies of 10 e-government projects in several states

of India and the lessons learnt from them. This book is a valuable addition to the literature and will be extremely useful to IT professionals and administrators planning new e-government projects.

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Bioethics. S. Ignacimuthu. Narosa Publishing House Pvt Ltd, 22, Delhi Medical Association Road, Daryaganj, New Delhi 110 002. 2009. 208 pp. Price not mentioned.

'There is more religion in men's science than there is science in their religion.'

— Henry Thoreau in *A Week on the Concord and Merrimack Rivers* (1921)

Time and again the applications of science and technology are questioned by society on ethical grounds and have been at the receiving end. Ethics are standards that frame our society. Bioethics deals with the ethical concerns arising from biology and medical sciences. There are four basic principles underlying bioethics – beneficence, justice, autonomy and non-maleficence. While the principle of beneficence indebts one to benefit others, the principle of non-maleficence asserts one not to harm others intentionally; autonomy implies the right to govern one's own life and justice means equitable rights for all.

This book of 208 pages is written in a simple manner and covers various aspects of ethics that concern biological

sciences. It is organized into five chapters, each highlighting a separate set of issues. All the four principles of bioethics are well defined in chapter 1 (History and principles). However, there is a contradiction to those mentioned in the Introduction, where the author states one of the principles as 'confidentiality' in place of 'non-maleficence'. The principle of confidentiality, which lays down that matters revealed in confidence must be kept confidential, is different from the principle of non-maleficence. This chapter outlines the parallel existence of ethics with medical sciences. However, the author makes statements without offering justification and reasoning. Some examples: 'Until 1960 the nurses were more concerned about doctors than patients' (chapter 1); 'Many journals are published on bioethics' (chapter 1; not one has been named by the author). The sentence 'Artificial insemination is a response to complete or incomplete male fertility [sic] due to impotence or defective formation of spermatozoa' (chapter 2), would rather be written as 'a treatment to partial or complete male infertility'. 'Artificial insemination involves injecting semen from wife's husband or from a donor' (chapter 2), the phrase 'the husband' instead of 'wife's husband' would have sufficed.

While highlighting the ethics concerning abortion (chapter 2 – Issues concerning reproduction, birth, life and death), there is no mention of pregnancy duration after which abortion is banned in India, i.e. 20 weeks. The author could have included a brief note on the Medical Termination of Pregnancy (MTP) Act¹, 1972 to give a brief account on the Indian abortion law. It would have been more appropriate if a case study had been discussed instead of elaborating upon the development of the human embryo; for instance, the recent Niketa-Harsh Mehta case where Niketa was denied termination of pregnancy. Her foetus was detected with heart blockage. Eventually Niketa had a miscarriage in the 27th week². The couple sought an amendment to the MTP Act that would permit abortion of a foetus more than 20 weeks into development (under special circumstances where doctors confirm the child to suffer handicap after birth)³. Burning issues like sex ratio and sex-selective abortions have been discussed. While mentioning the Indian scenario of sex selection, the sex ratio has been referred