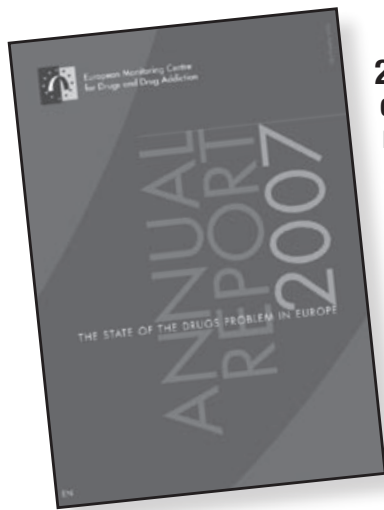


BOOK REVIEWS, NOTES AND COMMENTS

Edited by
Federica Napolitani Cheyne



**2007 ANNUAL REPORT
ON THE STATE OF THE
DRUGS PROBLEM**
European Monitoring
Centre for Drugs and
Drug Addiction

Luxembourg:
Office for Official Publica-
tions of the European
Communities; 2007.
ISBN 978-92-9168-288-1.
91 p.
(available at: www.emcdda.europa.eu/html.cfm/index419EN.html)

The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) publishes an annual report on the state of the drugs problem in Europe. This important publication, that has now reached its twelfth edition, includes also the following three selected issues, providing exhaustive analysis on specific drug-related problems: Drugs and driving, Drug use and related problems among very young people, Cocaine and crack cocaine (available online at: www.emcdda.europa.eu/html.cfm/index400EN.html).

The EU Member States, the candidate countries and Norway provide the EMCDDA with their own national reports on drugs problem, containing essential information for drawing up the present European annual report. With respect to the drug situation, as underlined in the report, particularly relevant is the European task to contribute markedly, even at the global level, at reducing drug demand and supply as well as in improving the information available on the drug current status. This undoubtedly sends out a positive signal proving the good developments in the difficult challenge for public health and social policy within Europe.

Another primary objective of the European drug policies is to reduce the harm caused by drugs consumption. This objective is pursued by increasingly improving and expanding the activities of prevention, treatment and social rehabilitation. The EU action plan on drugs is being reviewed and updated annually and is part of a more focused approach towards the evaluation of actions on the drug use

phenomenon. It is worthwhile to notice that this report presents a new analysis of data concerning the amount of money spent yearly in Europe to reduce drug demand and supply. Further, new indexes to be possibly used are mentioned: the Drug Harm Index (DHI), recently developed in UK, and the Illicit Drug Index (IDI), proposed by the United Nations On Drug and Crime (UNODC).

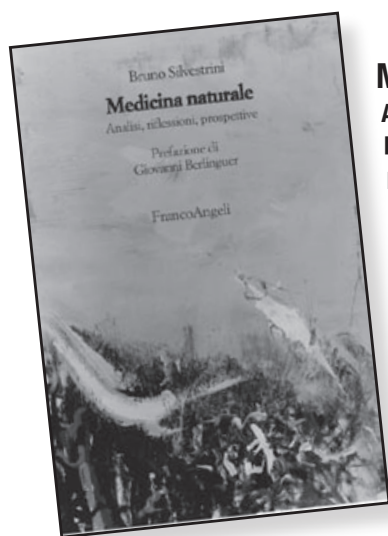
Each chapter reports specific drug-related topics: Policies and law, EU action plan responding to drug problems, cannabis, amphetamines, ecstasy and LSD, cocaine and crack cocaine, opioid use and drug injection, New and emerging drug trends and action on new drugs, Drug-related infectious diseases and drug-related deaths.

It has been ascertained that drug use is at historically high levels; but in some countries appears to be stable or even it hints at decreasing. Cannabis is mostly widespread among young and very young people and, generally, in Europe the trend is still increasing after 2000, even if it is recently becoming more stable. New data on cocaine reveal an alarming increase in use; it is the second most commonly used illicit drug, after cannabis and ahead of ecstasy and amphetamine. The highest prevalence of cocaine-using population is reported in Spain and UK, while crack cocaine use is quite rare in Europe. Heroin trend is stable but synthetic opioid consumption (such as methadone and buprenorphine) is a growing problem in Austria, Belgium, Denmark, Finland, France and Czech Republic.

Drug use and abuse is a very complex problem which is well characterized by the words of Marcel Reimen (Chairman, EMCDDA Management Board) and Wolfgang Götz (Director, EMCDDA): "As a monitoring agency, we deal in facts and figures; we are committed to being scientifically rigorous and impartial, interpreting the information available without prejudice or prior position. But while scientific rigour is essential to our work, we must never forget that behind the figures we report are real human beings whose lives have been affected and sometimes ruined by drug problems. Behind the dry statistics on treatment demand, drug-related deaths and criminal behaviour are the grieving families, lost potential and children growing up in unsafe communities. To develop effective responses to the drugs problem requires us to be dispassionate about our data, but we must never become dispassionate about the topic".

The report represents a valuable information tool on the drug situation in Europe to be used by policy-makers and their advisors, by specialists and practitioners in the drugs field and by anyone interested in this extremely serious public health issue.

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MEDICINA NATURALE
Analisi, riflessioni,
prospettive

Bruno Silvestrini. Milano:
FrancoAngeli Editore;
2007. 88 p.
ISBN 978-88-464-9000-1.
€ 20,00.

Complementary and alternative medicines (CAM) are at the centre of a lively debate: in the official science *milieu* they are usually perceived with suspicion if not with hostility, whilst an increasing part of the population is taking advantage from them.

Bruno Silvestrini's book, *Medicina naturale. Analisi, riflessioni, prospettive* is an important reference on the theme not only for researchers, scholars and professionals, but for all those who want to acknowledge a socially relevant phenomenon through clear and exhaustive explanations.

The book conjugates a colloquial style with rigour and sobriety of arguments. It helps the reader to get deeper with topics that transcend the specific field of natural medicine, and are valuable for the historical, methodological, ethical and epistemological reflection.

Still having a "didactic" purpose, its *genre* is of a colloquial kind and contains narratives that are drawn from everyday life and from the Author's professional experience. The book simply involves the reader: the reasoning often moves along with dialogues with the Author's nephews and is directed by their questions.

The first part of the book provides a basic knowledge that is aimed to frame the subject matter. Fundamental themes are presented: the concept of health, the endogenous and exogenous determinants of diseases, the modern development of molecular genetics, the double meaning of diseases – as

illness but also as biological richness – and the role of "diversity" in human societies, the different types of science-cognitive and applicative, the nature of medicine and drugs, the rise of bioethics and the "bioethics of everyday life".

Starting from these topics, Silvestrini proposes his view on the limits of science, on individual and collective rights, on respect for human life, and moves a critique towards the depersonalisation of modern healthcare.

The second part of the book significantly titles "The battle". Main problems of traditional medicine are described: the over use of "mercenary" drugs, that substitute their action to human natural defences, and the under use of preventive remedies, like vitamins and vaccines, that stimulate natural protections in the organism; the stronger emphasis given to non physiologic drugs, not least for patentability reasons; the unwillingness of modern medicine to search for the deepest causes of illnesses, and its tendency to relieve symptoms of diseases, instead of following a unitary view of the human body and of the interconnection among body and psyche.

A vast analysis of the constellation of non conventional medicines is also drawn, starting from homeopathy to phitotherapy, to the case of the "Di Bella multitherapy" and to many others. Silvestrini features the theoretical limits of non conventional medicines but also their potential, that mostly derive from their attempt to mobilise internal resources of the body, without substituting to it.

According to Silvestrini, traditional medicines should look at non conventional medicines with a fresh and non prejudicial look, to correct their own errors without renouncing to their principles and methods. This would allow to develop a more "natural medicine", as he calls it: "Humans internal resources are the results of an evolutionary process that made its choices and perfected itself by means of milliards experiments, that are incomparably more copious and deepened than those ever achievable by man. (...) Drawing from the organism's internal resources, this medicine draws from life. This is what I call *natural medicine*".

An interesting part of the volume is the "Intermezzo", where Silvestrini traces his "moral testament". It is a revelation and a memorandum of the history of the book. In fact, the writing took more than two years, as the Author hanged for many months before completing the second part. As he tells, the problem was not about the missing content of the book, but its implicit message: "It was a critique to my world, the world that educated me and grew me up, and that finally admitted me to its Olympus". In critiquing this world Silvestrini knew that he was contradicting a prevalent opinion in the scientific *milieu*, espoused by illustrious men of science. He also knew that his critiques started from a revaluation of CAM, that would have inevitably raised many attacks to his position. Finally, he knew that he could be accused of having longly served the

official medicine, that he was now discrediting, for mere opportunistic reasons.

In fact his real reasons are rooted in a rare professional experience, made of management of scientific laboratories, where theoretical rigour is the rule, but also of practice at the patients' bedside, where theoretical principles must contrast with a more concrete reality; not least they are made of acquaintance with multinational drug companies as well as small industries, and with their different marketing strategies.

Silvestrini's considerations, and especially those referred to bioethics, are intertwined with a long lasting activity in the Italian National Bioethics Committee, of which he was a member since its foundation in 28 March 1990.

In connection with Silvestrini's view of modern medicine two aspects of the book are worth to be signalled: historical analysis and bioethical reflections.

Historical analysis is stimulating for the numerous calls and citations on the progresses of medicine, with a strong reference to the history of the Istituto Superiore di Sanità (ISS, Italian National Institute of Health), that the Author knows well: after attaining a brilliant degree at the University of Bologna and before the rapid journey that leaded him, still very young, to direct the Lepetit Laboratory of Neuropharmacology in Milan, as well as the Angelini Institute in Rome and to a brilliant academic career, Silvestrini attended the ISS, with which he kept good and frequent relations through the years, especially with the Laboratory of Therapeutic Chemistry directed by the Nobel Prize Daniel Bovet.

In the chapter dedicated to bioethics, Silvestrini reminds many anecdotes of Daniel Bovet and the ISS. He remembers his permanence at ISS with words of emotion: "The two years that I spent there signed me deeply. I found there a fizzy and cosmopolite *milieu*, that was completely different from the University where I was coming from. You could encounter many young scientists and researchers from all over the world. Some of them were there for a conference, others were staying for some months to conduct their researches, others had decided to remain definitely. Among the least were Ernest Boris Chain, Nobel Prize for the study of penicillin, and Daniel Bovet, who received the Nobel Prize soon thereafter" (p. 88). Professor Silvestrini also remembers Domenico Marotta, who was director of the Institute since its foundational year and the bitter judicial affair in which he was involved defined by an authoritative international journal as an "incomprehensible political revenge" (Macfarlane G. Thunder in the air. Book review of *The Life of Ernst Chain: Penicillin and Beyond*. By Ronald W. Clark. New York: Martin's Press; 1985. *Nature* 1986;319:363-4).

In the chapter dedicated to bioethics Prof. Silvestrini also remembers Filomena Bovet Nitti as she suggested, or at least she contributed to found a view of bioethics that, to use Silvestrini's words:

"calls the life sciences to respect the rules that apply to every field of civil life" (p. 98).

For this reason the Author notices that "ethics is just one and its principles are valid for all human activities, including medicine and the life sciences".

In this perspective and starting from a view of research as "An anxiety of knowledge and a need to use knowledge to serve the human being", according to Bovet's words, Silvestrini discusses the meaning and the limits of "the scientist's autonomy" (p. 98). He writes: "Science, intended as knowledge and the aim to pursue it (...) is free. It is the means and instruments for its achievement that should instead be controlled" (p. 85).

By drawing limits to scientists' autonomy, the Author highlights relations among the scientific and the philosophical fields "at all levels: the theoretical, the applicative and the ethical. Not only can they likewise bring to the so-called reality, but the philosophical interpretation can have practical consequences that are far more rupturing than a nude "scientific reality" (p. 85).

The preciousity of his book derives from this rich life experience, following which the reader will perceive science as a very human enterprise.

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DIETRO LO SPECCHIO
Il misterioso fascino delle dimensioni addizionali, da Platone alla teoria delle stringhe e oltre

Lawrence M. Krauss
Roma: Codice Edizioni;
2007. 289 p.
ISBN 978-88-7578-070-8.
€ 19,00.

Che l'Universo si riveli nei fatti più complicato di quanto non ci appaia normalmente sta diventando sempre più chiaro a mano a mano che le nostre conoscenze progrediscono. Tuttavia, quel che maggiormente sorprende è l'elevato grado di complessità che la realtà di cui facciamo parte sembra sottendere.

Tutto questo lo si può ben evincere dalla lettura di *Dietro lo specchio* (titolo originale *Hiding in the*

mirror, Penguin Books, 2005), dove sono descritti, e commentati criticamente, gli attuali sforzi tesi a condensare in un'unica teoria le diverse manifestazioni del mondo fisico, sia quelle microscopiche che quelle macroscopiche.

L'autore, Lawrence M. Krauss, non a caso è un eminente astronomo: questa materia, infatti, nel corso del suo sviluppo si è trovata a dover considerare accanto all'immensamente grande anche l'immensamente piccolo; e questo a tal punto che si è arrivati al paradosso che le teorie immaginate per l'immensamente piccolo possono trovare oggi una loro conferma (o meglio, una loro confutazione) anche in base ad osservazioni sull'immensamente grande.

Il *leit motiv* del libro di Krauss è dato dalla possibilità che nel nostro Universo esistano "dimensioni addizionali".

Nei fatti, ciò che noi direttamente sperimentiamo è di certo una tridimensionalità spaziale e un carattere temporale degli eventi osservati. Questo carattere "dimensionale" del tempo è stato ben messo in evidenza, poco dopo l'avvento della Teoria della Relatività Ristretta, da Minkowski il quale mostrò che, pur avendo il tempo un suo preciso carattere rispetto allo spazio, spazio e tempo non potevano più essere considerati separatamente, bensì strettamente uniti tra loro in una sorta di "Spazio-Tempo".

La necessità di considerare altre dimensioni, oltre a quelle consuete, nasce dai tentativi di unificare le quattro forze ad oggi conosciute: l'elettromagnetica, l'interazione debole, l'interazione forte e quella gravitazionale. Più specificamente, nel tentare di produrre teorie da cui tali forze discendano come conseguenza si perviene a rappresentazioni matematiche delle stesse il cui numero di dimensioni è maggiore di quattro.

Un primo tentativo (risalente addirittura al 1914) conduce ad un modello pentadimensionale, in cui elettromagnetismo e gravità sono casi particolari nelle 4 dimensioni. Con il procedere delle ricerche (in particolare con l'avvento della Meccanica quantistica, della Teoria della Relatività Generale, con la messa in evidenza dell'interazione debole e di quella forte) il numero di dimensioni contenute nei diversi modelli è enormemente cresciuto, raggiungendo valori ragguardevoli (anche 28 dimensioni). Alla base di tutti questi modelli sta il concetto di "stringa", introdotto negli anni '60 da un fisico italiano, Gabriele Veneziano ed evolutosi successivamente, passando da stringhe ad una dimensione a stringhe multidimensionali. Anche se Krauss cerca di mostrare in modo chiaro l'evoluzione di queste teorie, seguendo un preciso percorso storico, la trattazione risulta assai complessa, probabilmente incomprensibile per il non-specialista. D'altra parte, ciò non deriva certo da una limitata abilità espositiva di Krauss quanto dall'intrinseca difficoltà matematica della materia trattata. Basti pensare che alcuni fisici protagonisti di queste ricerche hanno ricevuto i

massimi riconoscimenti in campo matematico (ad esempio, la medaglia Fields che, per la matematica, è il corrispondente del premio Nobel).

Il libro, comunque, non si limita soltanto a questi aspetti tecnici, ma ne considera altri due: uno riguarda il fare correttamente fisica; l'altro è invece di carattere sociale.

Per quel che riguarda il primo punto, Krauss (e molti altri fisici) accusano i colleghi che operano nella Teoria delle Stringhe di fare soltanto matematica, non già fisica. A questo riguardo, sottolineano che la strada percorsa è sterile in quanto sinora queste teorie non hanno trovato riscontri sperimentali, né addirittura – a detta di alcuni – hanno fornito indicazioni per le verifiche sperimentali stesse. Questo punto di vista non è irragionevole; tuttavia, sembra un poco forzato. Per quel che riguarda la matematica, non c'è dubbio che le leggi di natura trovano in essa il proprio linguaggio. E, se vogliamo, tanti sommi fisici hanno prodotto le loro teorie con un approccio sostanzialmente matematico. Basti per tutti, a questo riguardo citare Dirac, come d'altra parte da lui stesso riconosciuto più volte. E sempre in riferimento a Dirac, e alla sua celebre equazione, non va dimenticato che l'esistenza dell'antimateria – da essa sottesa – è stata motivo di imbarazzo per i fisici sino a quando Anderson non ha messo in evidenza, studiando interazioni della materia con raggi cosmici, l'esistenza del positrone. Per quanto riguarda poi le verifiche sperimentali delle teorie in questione, già da quest'anno ne sono previste numerose con l'attivazione del Large Hadron Collider del CERN che è in grado di operare ad energie mai raggiunte sinora (basta andare su Internet per averne copiosa documentazione, anche relativa a specifici esperimenti).

Più complesso appare invece il secondo punto, quello relativo all'impatto sociale di queste ricerche. La critica di Krauss è che questo settore gode di una ingiustificata enfasi mediatica che ha prodotto sia una riduzione delle risorse assegnate alla fisica sperimentale, sia un deleterio allontanamento di tantissimi neolaureati in fisica da un percorso di crescita più valido. Anche se si può essere in parte d'accordo con lui, resta il fatto che le cose sembra stiano già cambiando, in particolare negli USA dove appare profilarsi una restrizione di fondi concessi ai teorici delle stringhe.

In conclusione, il libro di Krauss ci parla non soltanto delle dimensioni addizionali che la teoria delle stringhe propone, ma anche dell'attuale momento che sta vivendo la fisica.

Probabilmente, una gran parte delle questioni che sono da lui proposte troveranno risposta in base ai risultati degli esperimenti eseguiti con il Large Hadron Collider, previsti a partire dal 2008.

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EQUIVOCI BIOETICI

Paolo Vineis. Torino:
Codice Edizioni;
2006. 125 p.
ISBN 88-7578-061-7.
€ 15,00.

Equivoci bioetici by Paolo Vineis focuses on equivocations, misunderstandings and omissions that may impair, if not severely affect, the possibility of positive interactions or even cooperation between religious and secular ethical approaches to problems associated with scientific progress, especially in the domain of life sciences.

The working hypothesis of the Author is that difficulties of the present situation are the consequence of a number of factors, first of all the fact that both scientists and moral philosophers have poor awareness of the most recent developments in epistemology. Researchers, in the absence of specific training in philosophy of science, may easily develop a somehow authoritative vision of their knowledge, becoming intolerant towards any call to prudence and caution. Moral philosophers, on the other hand, may still refer to a neopositivistic view of science, either supporting it from a “liberal” secular prospective, or blaming it from a “radical” standpoint, the latter deriving its underlying values both from religious beliefs or from environmental commitment.

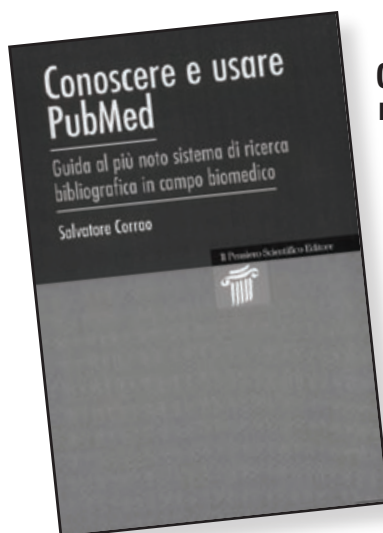
The effort of the Author is thus to disentangle scientific evidence (which have to be evaluated in causal terms) from current opinions and from moral values, in order to keep the various issues clearly distinct and discuss each of them in the appropriate framework. In this structure, a number of complex items are reviewed and critically addressed, namely gene-environment interaction, enhancement technology, human clonation, genetically modified organisms, evolution, global environmental change. A constant trait of the discussion is the attention paid to conflicting opinions and the awareness that we live within the dialectic tension between two aspects: gratitude for life conceived as a gift (even if the doner might be unknown) and creativeness aimed at improving quality and quantity of life.

Progress in scientific knowledge can certainly change our vision of mankind and of nature at large. On the other hand, a religious view of the world is somehow embedded in our history and has contributed to shape it.

A novel input to a positive interaction between religious and secular bioethics may stem from the perspective proposed by Vineis. It requires to dismiss the search of an “Archimedean” point, that is a privileged point from which man evaluates the truthfulness of scientific knowledge and the goodness of moral laws. Both in epistemology and in ethics an objective external foundation has been replaced by the notion of being “rooted” in life and in nature, and of acknowledging this feeling of awareness.

The latter statement has an obvious religious bearing, in as much as we refer, with this term, to an in-depth appreciation of the challenges that life continuously discloses to us. In this approach man does not refer to abstract rules but rather establishes relations, links, agreements, pacts. On this foundation, following a philosophical and theological pathway indicated by authors like Ricoeur, Bonhöffer and Habermas, it is possible to find the premises to transform into cooperation the current conflict between religious and secular bioethics.

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CONOSCERE E USARE PUBMED Guida al più noto sistema di ricerca bibliografica in campo biomedico

Salvatore Corrao. Roma:
Il Pensiero Scientifico
Editore; 2007. 108 p.
ISBN 978-88-490-0190-7.
€ 14,00.

Written by a physician for physicians, students and health professionals, *Conoscere e usare PubMed* illustrates PubMed main search features. Following the dictates of Corrao, it is possible to learn the ideal searching technique to find only pertinent papers without losing anything relevant.

The book is divided into three chapters. In the first, the Author describes the “universe of biomedical information”. The NIH (National Institutes of Health) is one of the eight US Public Health Agencies, and includes 27 institutes and research centers. Its mission can be condensed in a single sentence: to disclose a new knowledge to grant a better health to everyone. Its library, the National Library of Medicine, is the largest in the world, covering different fields of human

knowledge, biomedicine and social sciences. PubMed (Public Medline) is an interface and, *par excellence*, a database specialized in biomedical literature. Medline is the best known database in biomedical field and is the main component of PubMed. It is the electronic version of the Index Medicus which, printed for about 125 years, represented the most important bibliographic reference tool for many generations of researchers. Medline is even more analytic and additional information is inserted for each bibliographic citation: MeSH terms. MeSH (Medical Subject Headings) is a tree-structured thesaurus of medical terms: each record has different fields for descriptors, tree position and an alphanumeric code that corresponds to the position in the respective tree. It is a controlled, standardized, uniform, non-ambiguous vocabulary, adopted in the promotion of an open dissemination of clinical and biomedical information at a global level. PubMed is an asset for the world.

The author briefly describes also PubMed Central which is a free digital archive of biomedical and life science journals with full-text articles. With a specific search engine, PubMed Central is the result of a campaign carried on by NLM towards free scientific information, making possible for everyone to access information free of charge.

In consideration of millions of documents stored in PubMed, it is easy to drown in this sea of information: this is the danger of information overload. Corrao, in the second and third chapters of the book, shows in

detail the structure of PubMed basic and advanced searching tools. AND, OR, NOT Boolean operators, search through the Medline TAGs: – Author [AU], First Author [1AU], Last Author [LASTAU], language [LA], MeSH term [MH], MeSH Date [MHDA], etc., the “accurate search” with sentences enclosed by inverted commas, the direct search of journals, the use of history, etc. The search strategy becomes complex and it is not easy to find the minimal number of relevant articles; it needs time, care and precision.

Evidence Based Medicine is a core element of this manual. The author focuses on the need for strong collaboration between physicians and experts in bibliographic searching, to obtain the best results. EBM is described as a branch of knowledge of utmost importance in solving clinical cases.

At times not so easy to read (a subject index would have been useful), *Conoscere e usare PubMed*, however, collects in a few pages a large number of information, acronyms and links. Frequently, while reading the text, it is advisable to stop and practice. The manual is handy, detailed, concise and rich in bibliography and links. The characters are quite clear for a pocket book. It allows a first glance at the topic and a quick guide for experienced users; it is a manual for innovative and better medicine.

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