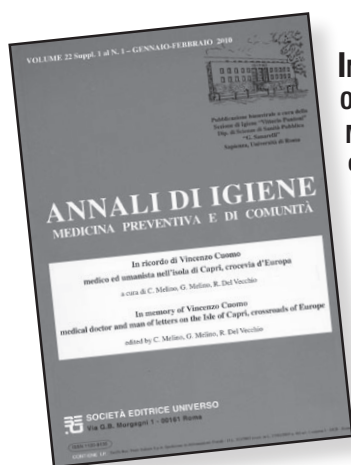


BOOK REVIEWS, NOTES AND COMMENTS

Edited by

Federica Napolitani Cheyne



**IN MEMORY
OF VINCENZO CUOMO**
**Medical doctor and man
of letters on the isle of Capri,
crossroads of Europe**

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C. Melino, G. Melino,
R. Del Vecchio (Ed.).
Roma: Società Editrice
Universo; 2010. p. 65.
ISSN 1120-9135.

If Rome is (or was) *caput mundi*, Capri certainly deserves to be defined the crossroads of Europe. In fact, the beautiful small island has been for centuries the spectacular stage of many outstanding human cultural achievements in quite different fields, due to the more or less extended sojourns of a host of distinguished protagonists (see Tito Fiorani's catalogue of the houses and villas of Capri's "immigrants" [1]). Of course such an exceptional place, besides its *fasti*, could not avoid a series of glamorous *nefasti*: and Capri can boast quite a few of the latter, ranging from the legend (almost certainly a fake) about Emperor Tiberius' "monstruous pleasures" (this term is from a respectable biographic encyclopedia) to the sad story of the German conservative gun magnate Alfred Krupp. *Nihil novi sub sole*: at the turn of the 19th century, Krupp's homosexuality was exploited for a political lynching campaign from the left, which resulted in his banning from Italy. Soon afterwards he died prematurely, on November 22, 1902, in his majestic Villa Krupp in Essen – a demise officially attributed to a stroke, but almost certainly due to suicide, likely on suggestion of a close friend, Germany's Kaiser Wilhelm II.

Books, articles, movies, etc., about Capri are by now innumerable, but new interesting items continue to appear. The present special issue of *Annali di Igiene*, of remarkable interest for the medical and related sciences, is about a man – Vincenzo Cuomo (1858-1935) – who devoted more than 50 years of his life to medical, public health and various other scientific and cultural activities in Capri. Cuomo, a Neapolitan, after graduating in medicine as a bril-

liant pupil of the famous Antonio Cardarelli, was the victim of an accident during an autopsy, which caused an infection resulting in the loss of one eye. After such an ordeal, in 1882 he came to Capri for a period of recovery, and shortly afterwards decided to remain there for the rest of his life: not only as a district municipal doctor and public health officer, but also as epidemiologist, meteorologist, climatologist, and eventually as one of the founders of modern climatotherapy, particularly thalassotherapy.

As concerns medicine – plus many other activities of distinguished physicians – Capri at the turn of the 19th century and the initial decades of the 20th century was like the proverbial Chinese hill, hosting three tigers, however, rather than only two – Cuomo, the Swedish Axel Munthe and the American John Clay Mac Kowen (or Mac Khowen). The best known internationally was Munthe, author of the *History of San Michele* read by millions in different languages, whose fame needs not to be documented here. Mac Kowen was a flamboyant millionaire Louisiana planter who used to flog his slaves (and also some of Capri's peasants during the initial years of his sojourn in the island, where he went around with topee, whip and boots with spears). He had fought in the Civil War as colonel of the Confederate Army and left for Europe after the defeat of the Southern States. Then he graduated in medicine at the University of Munich, and eventually ended up in Capri in 1876, where he built the famous Casa Rossa, also in Anacapri. Incidentally, the relations between Munthe and this volcanic character were far from friendly: to the point that the latter, after a hot controversy over a local medical issue, challenged Munthe to a duel (which, however, did not take place). But Mac Kowen could alternate bouts of extreme aggressiveness and bouts of extreme generosity, taking medical care at no cost and donating medicines to poor people, so as to deserve the picturesque nickname "ciacca e mmereca" (beats and medicates; [1] p. 413-4).

Cuomo's medical and other activities are well illustrated by the articles in the publication under review: particularly the one on his medical and public health work in Capri, by C. and G. Melino of the Rome Universities "Sapienza" and "Tor Vergata"; and the one on his pioneer work in thalassotherapy, by E. Lampa, of the *ad hoc* Italian association,

and F. Rossi, of the University of Naples. The villa built by Cuomo at Anacapri included a modern meteorological observatory. The selected nosographical, epidemiological and climatological protocols which illustrate the first of the aforementioned articles testify of a remarkable ingenuity and scientific rigour: see, for example, the nosographic data on tuberculosis patients and the analysis of their improvement during the sojourn in Capri (Table 2, p. 24); or the records concerning mortality due to seven infectious diseases in Capri and Anacapri in the years 1883-1892 (Table 3, p. 25); or the striking precision of the meteorological records decade by decade (Table 5, p. 26) and various other climatological data (Table 6, p. 28 and Figures 2-7, p. 29-30). Cuomo had an intelligent, person-centered holistic approach to the problems of health and disease, as testified for example by his concern for the psychological aspects of illness and by the important role he assigned to environmental factors in the management of "neurasthenia". He also was an expert musician, having studied at the famous Neapolitan conservatoire of San Pietro a Maiella, and made a successful use of music in the therapy of depressed patients (p. 33). Cuomo's relations with the population, the local authorities, and several of the Italian and foreign stars of Capri's heaven were constantly excellent. Krupp, in particular, for whom engineer Emilio Mayer had built the famous road from Anacapri to Marina Piccola (the magnate never had his own villa, but lived partly in a suite at the Hotel Quisisana and partly on his yacht), was his patient and friend. He had approved and accepted to finance some important public health and other projects drawn by Cuomo, but most of them were blocked by the scandal and banning of the magnate. In addition to several significant prizes and other acknowledgments from national and international medical and scientific authorities, in 1905 Cuomo was awarded the honorary citizenship by the municipality of Capri. The publication reviewed here should be consulted for much additional information of considerable interest, including sections devoted to biographic data, publications, prizes and other acknowledgments, etc.

Two final recommendations for your next visit to Capri. First, don't miss the three important places in Anacapri which continue to testify on these and other related significant parts of the island's history: the *Casa Rossa*; *Villa San Michele* and *Villa Cuomo*. Second, take with you a copy of this issue of *Annali di Igiene* and a good guide to Capri's sanctuaries, like the comprehensive and well illustrated one already quoted [1].

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IDENTITÀ ALLA PROVA

La controversa storia del test del DNA tra crimini, misteri e battaglie legali

Alice Andreoli.

Milano: Sironi Editore;

2009. 252 p.

ISBN 978-88-518-0122-9.

€ 17,00.

"This is the story of a scientific discovery that has changed the world. It's the story of a war that was fought for years in courtrooms and scientific laboratories. It is the story of people sentenced to death and recognized innocent, of murderers who were discovered when they were sure that they had gotten away with the crime [...] This is the story of the DNA test, the most important revolution in criminal investigations [...] Someone defined it as a perfect proof, a real lie detector, a paradigm, the last frontier of those who believe that science can give us any solution. But what does it consist of? Is it really infallible?" These are the words used by the author in the preface of the book and the questions she asks herself and for which she tries to find an answer.

This is not a technical text claiming to provide scientific details which could make the content incomprehensible to most people or addressed only to those working in scientific fields, but a book that makes forensic genetics, which has come into our houses through a media campaign that shows only in part what happens during an investigation, approachable and fascinating.

The book turns the reader into a forensic geneticist who provides investigators with DNA tests as additional tools in the attempt to bring the perpetrators to justice and save innocents from summary judgements.

The author describes the role that DNA testing has in the resolution of court cases in both national and international scenarios and in cases where the test itself is on the witness stand as an issue of scientific and legal debates.

DNA tests provide the scientific dimension to criminal cases (OJ Simpson), identity to those who have lost theirs, roots to those who have been deprived of them (sons of desaparecidos) and restore the historical truth on legends that have held the stage for decades (Anastasia Romanoff).

The historical background of DNA tests reported by the author starts from the "DNA fingerprinting" first described in 1985 by Alec Jeffrey, an English geneticist who found that certain regions of DNA

contained sequences repeated over and over next to each other and that the number of repeated sections could differ from individual to individual. By developing a technique to examine the length variation of the DNA repeated sequences, Jeffrey created the possibility of performing human identity tests. Individual identification is desirable in several situations, among others the determination of murder and rape perpetrators, the resolution of unestablished paternity and the identification of the remains of those missing after a mass disaster.

Since 1993 forensic science has benefited from the support provided by the polymerase chain reaction (PCR) that let the geneticists make thousands of copies of DNA samples whose limited quantity and quality on the crime scenes often restricted the possibility to perform multiple analyses on them. More recently a high power of discrimination was achieved with short tandem repeat (STR) typing systems, with the analysis of mitochondrial DNA (mtDNA) which is maternally inherited and helpful in cases involving highly degraded DNA and of single nucleotide polymorphisms (SNPs) that received attention due to their abundance throughout the human genome.

Alice Andreoli highlights the great support DNA tests provided to investigations without neglecting the statistical limitations that have often made the tests unacceptable as proof of innocence or guilt, and the accidental and voluntary errors that can be encountered in the test.

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IL FISICO CHE VISSE DUE VOLTE
I giorni straordinari di Lev Landau, genio sovietico

Fabio Toscano.
Milano: Sironi Editore;
2008. 288 p.
ISBN 978-88-518-0096-3.
€ 18,00.

The life of Lev Davidovic Landau, one of the most outstanding physicists of the past century, is a remarkable *mélange* of scientific achievements and personal adventures, in the background of the harsh times of Soviet power.

Landau, born in 1908 in Baku (Azerbaijan) from a Jewish family, very early revealed himself as one of the most promising young Soviet talents. But his unique intellectual strength was not the only remarkable aspect of his personality. An unlimited appreciation for the many beauties of life (with a special place deserved to women) together with a sharp sense of humor and an indomitable aversion for bureaucracy, rhetoric and the arrogance of the establishment were among the distinctive aspects of this exceptional personage. His life has been inextricably interwoven, both in its cultural aspects and its private happenings, with the surge and the growth of Soviet power in the former Soviet Union.

The book by Fabio Toscano (in Italian language, published by Sironi in 2008) aims at representing the above mentioned peculiarity of Landau's years that saw his splendid intellectual raise as one of the most prominent and respected theoretical physicists in the world deeply entangled with the political events of Soviet Union.

In my opinion this goal has been brilliantly achieved. Along with a clear and very effective popular presentation of Landau's pioneering work mostly in the field of superfluids physics and of phase transitions theory, the reader is offered with a remarkable description of the terrible events that, starting from the beginning of the 1930-1940 decade and up to the death of Stalin, have marked the destiny of millions of Russian citizen. One should in particular appreciate the description of liquid helium-4 phenomenology and of its theoretical understanding, which we owe to Landau, and, on the other side, of the events which led to the Soviet atomic bomb with their very strong impact on the Soviet physicists community.

To this I would add the remarkably accurate description of the tragic events which, in the sixties, led to the death of Lev Davidovic, after the dramatic car accident of which he had been, sadly, the victim.

Perhaps a few aspects of Landau scientific work remain somehow in the shadow in Toscano's book, like his contributions to quantum field theory and electrodynamics.

But having said that, I would recommend this book also to a reader not skilled in physics, as an exciting journey in an extraordinary intellectual adventure and, simultaneously, in the drama of some of the most terrible years of the past century.

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LEI LO CHIAMA MONKEYLUV...

**Amore di scimmia. E altre
riflessioni sull'animale
uomo.**

Robert M. Sapolsky.
Bologna: Gruppo Editoriale
Muzzio srl;
2010. 224 p.
ISBN 978-88-96159-25-5.
€ 16,00.

Robert M. Sapolsky is well-known as a brilliant primatologist and neuroscientist and he is presently professor of Biological Sciences and Neurology at the Stanford University, as well as associate researcher at the National Museums of Kenya. Furthermore, he had gained remarkable field experience with baboons (see *A Primate's Memoir* published by Touchstone Books in 2002).

In *Monkeyluv* he deals with a collection of essays that mainly ran in *Discover*, *Natural History*, *The Sciences* and other journals. Sapolsky synthesizes scientific researches in an engaging and compelling style, encouraging you to read more (very remarkable and helpful the extensive annotated bibliography). By witty or serious prose, from time to time, he brings the reader to discover and think about animals', including human, nature, as well as to reflect on our society and on our daily behaviours. In particular, three major scientific issues are tackled across this book: the relationship between genes and environment argued considering its influence on exhibition of the different behavioural patterns; the influence of behavioural biology on social and sexual contexts; and finally, Sapolsky tells and discuss some remarks and evaluations on how the human society shapes our beliefs and feelings.

The curiosity of the author brilliantly shows the different subjects presented through the book, and so we come face to face with what the *People* magazine's "50 Most Beautiful People" think about determinism, what makes one organism sexy to another, or why old people are neurologically disinclined to like whatever music appreciated by young people. The concept that genes determine our behaviour and our physiognomy is widely spread among lay people, so the author extensively discusses this issue, successfully arguing the total nonsense of such an idea. As he writes in *A Gene for Nothing*, for instance, actual genes make up only some 5 percent of the human genome. Among the rest of the DNA are regulatory elements that instruct the genes to turn on and off according to cues from the environment.

The importance of always present interaction between genes and environment, and not the suprem-

acy of either (of them), is the fundamental message that Sapolsky wants to be well-known. With a delightful style author gives important information of behavioural biology, for example explaining that throughout the whole animal kingdom, individuals of both sexes respond to the other sex following conventional attractions. Nevertheless, certain very particular traits, such as the huge plumage, the wild coloration, the strange appendages, exert an even more magnetic attractive, providing a greater reproductive success as final result (the Darwinian sexual selection). These exaggerated characteristics are, or should be, indicators of good health. In fact, an individual that wastes energy for aesthetic ornaments must be in a very good health status.

Running across the book, with an entertaining manner, Sapolsky faces the complex daily matching between the sexes. He tells about the bafflement in that each man (and each women) is involved when confronted with "his other half of the sky" (in very strong agreement with a few Italian colleagues). It is really interesting and amazing to read around the genetic basis of why that niggle by our partner seems to be so often obscure, is both for erudite and ordinary reader, it is noteworthy the discovery that much of behavior is driven by proximal (and not ultimate) cues. For behaviors that are evolutionarily vital, that so often involve risk to life, the motivation can't be abstract and delayed, but these have to be driven by proximal cues. Among these, the author includes the motivation for sexual behavior, concluding that animals, including human beings, are interested in sex because it feels good. A very revolutionary vision, as much interesting as by what was taught in the University classrooms until some years ago.

Nevertheless, he underlines as, both in human and in non-human primates, the ultimate issues, not proximal ones, seem to be involved when people choose their mates. In this case, in fact, someone who is kind, loving, capable of being a good parent resulted to be considered the right choice to grow old with. In last chapters, Sapolsky presents thoughtful observations, inducing the reader to think about the present and past social context and its potentially detrimental impacts on our health status. In particular, he reports the concept of Social Economic Status (SES), underlining as rich people or the most developed (actually, the richest) countries can result the most interested in psychiatric and psychological diseases because the world around makes them feel sick. His way of presenting and criticizing the present degree of medicalization in "modern" psychiatry is one of the most crucial part of the book for a specialized biomedical community, particularly in Italy (Franco Basaglia's country) [1-3].

The pathological and worry distortions of present world are dreadfully told in chapters as "nursery crimes," the longest essay in the book, where the personality disorder called Munchausen's by proxy was

investigated. A distraught parent, almost always a mother, secretly poisons her child, inducing symptoms of any unknown disease. Her final aim is to take her sick child to the hospital, where she will quickly become integral part of hospital staff, doctors and nurses will appreciate her fortitude and friendship, unwittingly promoting her mortally pathological design. It is really terrifying, in fact the death rate of children so abused is nearly 10 percent.

Perhaps, just a minor remark on the book: it is difficult to see the link between the third and the two previous sections. In fact, the genetic-based mark followed across the most part of the book is then lost in the final section that seems to be focused on a more closely sociological aspect. Probably, the limitation is the obsessive intellectual curiosity of the author that induces him to go from topic to topic without an apparent link. However, this is not a big deal, because the very easy reading makes this book really advisable to anyone who wishes to be more close to the enormous complexity of science, and to engage him/herself in a truly

delightful adventure. As many science bestsellers, this non-homogenous collection of essays may be very easily digestible also by potential readers who are underground, bus and train travelers.

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