

BOOK REVIEWS, NOTES AND COMMENTS

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PRAECURRIT FATUM!
Arrivare prima del destino
Marcantonio Lucidi,
Alessandro Orlandi (Eds)
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*[Praecurrit fatum! Anticipating
the destiny]*

The substantive “Fatum” (fate, destiny) is what Latin grammars call a “vox media” (literally, “middle noun”), that is, a “neutral” term which, based on the specific context, can have two opposing meanings.

Thereby, the book’s very title reminds the reader of a fundamental truth. Humankind’s fate can be ill or prosperous: it all depends on the actions and efforts collectively deployed by society. Can intellectuals analyze and subsequently isolate enough elements to predict the fate of our increasingly precarious and geographically limited wellbeing? The book attempts to provide a positive answer. It marks the beginning of a rather original collaborative editorial project: bringing together diverse competencies, spanning from theoretical physics to ethology, from history and economics to molecular biology, and music. The envisioned outcome is a “lab of ideas and proposals”.

For the sake of synthesis, I will not delve into the essays covering social psychology, contemporary history, economics, and social sciences. Nonetheless, even a layperson cannot help but notice the enriching and well-condensed perspective with which intricate topics, such as the role of social media, quantum computing, international fiscal policies, the changing labor market, European history, and the future of democracy, are illustrated in this collection of short essays.

Before COVID-19, the World Health Organization (WHO) listed climate change as the most urgent threat to global health. It is still imperative that governments and the private sector should not disregard this crucial challenge now. In a dedicated book section, Enrico Alleva, evolutionary behavioral scientist, and oceanographer and Intergovernmental Panel on Climate Change (IPCC) member Vincenzo Artale discuss climate change thoroughly, with an original joined dissertation. They provide detailed technical explanations of

the assumptions behind climate models, often clarified by incisive metaphors. For instance, it is intriguing to picture the various interactions happening inside a chaotic system, like climate, as a Billiards game where the ball’s trajectories vary amply, depending on the initial impulse. They also offer meaningful insights from an evolutionary biology viewpoint. The challenging definition and boundaries of the so-called “Anthropocene”, the continuous mapping of the disproportionate impact of *Homo sapiens* on the Earth’s biodiversity (including viral spreading in population outbreaks of both animals and plants), and the usefulness and limitations of the Big Data and the Citizen Science approaches, are among the explored topics. The essay ends with a call to action, fueled by the awareness that COVID-19 has dramatically unveiled the entanglement between environmental degradation and spill-over risk.

The short but incisive essay titled “RNA and biology’s future” by molecular biologist Piero Benedetti is of the utmost interest for a biomedical readership. He provides a brief historical overview of genetics and its evolutions from the Human Genome Project onwards. In particular, the complex theoretical milestones of the “RNA world” hypothesis are laid out, along with the most updated evidence of translational research arising from the new CRISPR-Cas9 genome editing technique. In a matter of years, genomics will easily treat hitherto incurable hematologic disorders linked to single-gene abnormalities, and several chronic diseases will be fought by innovatively acting on the microbiota. The rising discipline of “personalized medicine”, the author notes, is promising but raises ethical ambiguities, which must be identified.

Finally, celebrated musician Nicola Piovani and journalist Marcantonio Lucidi ask themselves whether modern Artificial Intelligence (AI) has created such evolved products that deserve to be acknowledged as “artificial souls”. Paraphrasing the famous essay by Walter Benjamin, the authors seem to shed an overall pessimistic light on arts’ originality at the time of its algorithmic reproduction. In medicine, entire diagnostic fields (e.g., pathology and radiology) already feature massive amounts of computer-assisted inputs and guidance. Will more traditional disciplines such as psychiatry and internal medicine follow? Recent evidence already shows that machine-learning analysis can handle the differential diagnosis between major depression and anxiety almost perfectly.

In conclusion, *Praecurrit fatum* represents a thought-provoking and intellectually challenging collection of selected essays. It overtly cultivates the ambitious project to rebuild a form of “modern humanism” by part-

nering up intellectuals who can give society a unified cultural lens to read the most critical phenomena of our time. It may represent a stimulating reading for biomedical scientists of a variety of disciplines and social scientists alike.

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ALLATTAMENTO.

Mi hanno detto che...

Anna Maria Altobelli,
Valentina Della Bella (Eds)
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[Breastfeeding. They said...]

Breast milk is an irreplaceable asset: it is organic, ecological, zero kilometre, free, practical, always available and, at the right temperature, easily digestible. Breastfeeding is not only physical nourishment, but also a fundamental emotional and psychological bond between the mother and the offspring [1]: it promotes the mother-child bond, satisfying and strengthening their mutual need to survive and live together. Maternal milk has been species-specifically evolved for the newborns, is endowed by all the “optimal” ingredients to nourish physiologically them, has the power to strengthen their immune system by protecting from infections and diseases, while promoting both the health of the mother and of the offspring in the short and long term [2].

Quite recently, in 2019, the Italian Ministry of Health launched a sensitization campaign to promote breast milk feeding. This campaign is finalized to raise awareness among women about such a practice and the spontaneity of this behavioural and physiological action, powerfully diffusing the message that every woman should feel free to breastfeed publically or at work, always and always, its spot vividly claiming: “That’s natural!”

The Italian National Institute of Health (Istituto Superiore di Sanità, ISS) has been of course involved in most of these activities aimed at promoting breastfeeding. In particular, in protecting vulnerable and fragile populations, human milk, for its lipophilic capability to concentrate environmental toxicants, represents a very useful medium to evaluate human body contamination [3, 4], as in the case of caesium contamination following the Chernobyl accident [5] or of exposure to persistent pollutants [6, 7]. Nutritional value [8] and long-term ameliorative effects on neuropsychological development in infancy [9]. Presently, the ISS institutional website presents a whole array of public health

counselling and socio-sanitary promotion initiatives aimed at both health professionals and the general public.

Breastfeeding itself was a focus of public, sometimes “political” debate. A long time ago, in the ‘70, Nobel laureate Daniel Bovet, who for decades ran a laboratory at ISS (from 1947 to 1964), participated in a long and at times harsh international debate on health problems possibly attributable in poor countries to the free distribution of milk powder Nestlé. In 1981, the 34th World Health Assembly (WHA) adopted Resolution WHA34.22 which included the International Code of Marketing of Breast-milk Substitutes. In the recent history of global public health this episode perhaps remains a matter of forgotten discussion.

The present mini-guide is a simple, fluid, and somehow innovative contribution possibly useful to “explore”, while educating, the specific theme of breastfeeding. The real aim of this short volume is not to improve in a few, sometimes naive statements, the available scientific knowledge about such a delicate and still not rarely debated issue, but simply to offer some different perspectives to raise awareness and to inform correctly about this apparently familiar topic. More importantly, the contemporary fragmentation or even pulverization of the social tissue, jointly mixed with the widespread gravitational force attracting rural communities toward immense metropolitan areas, makes such an editorial effort worth mentioning. Without an appropriate social setting, e.g., the peculiar case of teen mothers in deprived urban areas or favelas, substantial and consistent difficulties arise in caring for their newborns.

In a concise form, the authors give voice to mothers living in central Italy (Umbria region) in order to highlight some putative incorrectness of current popular myths and prejudices that revolve around breastfeeding traditions. To avoid them, they propose a list of practical suggestions in order to help particularly primiparous mothers to face a few inaccuracies disseminated in their social milieu.

The essay is composed by a first section dedicated to the beliefs of relatives and friends regarding breastfeeding, a second entrusted to some thoughts of health personnel, and a third concerning the ideas of pediatricians. Although far from being scientifically grounded, the authors attempt to overturn some current beliefs about this issue. They try with a rather superficial overview to explain for example any rigid duration of the breastfeeding period, the possibility to eat any kind of food without major consequences on the milk composition or the importance of excluding any other nutritional input food besides maternal milk to the neonate, infant or early children. It appears surprising that in Central Italy such ideas are still circulating.

It is worth mentioning that this booklet is enriched with photos representing the parent(s)-child dyadic union to even more emphasize the spontaneity and the universality of the breastfeeding phase. Despite its “natural” occurrence during the human history [10], it is however possible that the cultural anthropology of breastfeeding practice deserves continuous maintenance and adjustment.

Finally, the present booklet may testify the recent and increasing effort by a variety of complementary, even non-strictly socio-sanitary, institutions (Agenzia Regionale Protezione Ambiente - Umbria, under informal collaboration with USL Umbria2 consultorio Narni-Amelia, family pediatricians belonging to local USL Umbria2, "Associazione lattemiele", and Auser, voluntary and social promotion association, the latter committed to promoting the active aging of the elderly while enhancing their role in society) to ensure a truly territorial and locally-based, multi-faceted material.

Possibly, the fact that author Valentina Della Bella, graduated some time ago with a thesis on water health quality assessed by monitoring of freshwater microinvertebrates at the ISS Department of Environment and Health may have played a not minor role in such a vivid public health editorial strategy.

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