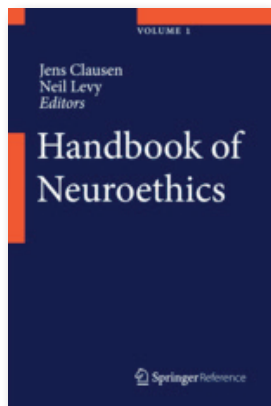


BOOK REVIEWS, NOTES AND COMMENTS

Edited by

Federica Napolitani Cheyne



**HANDBOOK
OF NEUROETHICS**
Jens Clausen and Neil Levy
(Eds)
Springer Reference; 2015
3 volumes, 1850 p.
ISBN 978-94-007-4706-7.
€ 749,00.

The question “What is neuroethics?” finds relevant and important cues for an answer in the recent impressive *Handbook of Neuroethics* edited by Jens Clausen and Neil Levy. The book, involving many leading scholars in the field of neuroethics and neuroscience, is an important example of multidisciplinary reflection about the impact of brain and mind sciences on traditional philosophical, ethical and social categories.

The book is divided in three volumes (Conceptual Aspects of Neuroethics; Special Issues in Neuroethics; Neuroethics and Society), with a total of 23 sections, and to date it is surely one of the most complete description of neuroethics assumed both as neuroscience of ethics and ethics of neuroscience. Maybe a specific conceptual assessment of neuroethics as a critical (i.e., epistemic) reflection of neuroscience is lacking, as well as a specific attention on modeling and simulating the brain as the prospective way to understand it and our mind (but a specific section on brain imaging is included). In the end, the so-called ethics of neuroscience, or practical neuroethics, is more present in the book, even if important attention to foundational issues is included.

While the label “neuroethics” is quite new and can be traced back to the beginning of the 20th century [1], issues arising from the interaction between neuroscience and ethics have been an object of interest by ethicists, particularly philosophers, even before the birth of neuroethics as a formally identified discipline [2]. From ancient Greece onwards philosophers have focused on human mental activities as the element peculiar to human identity. Two avenues have been traditionally developed within the general conception of mind: a non-materialistic and idealistic approach (i.e., the mind is made of a special stuff not-reducible to the brain); a materialistic approach (i.e., the mind is no more than the product or the property of the brain). Both interpretations assume a dualistic theoretical framework: the human being is constituted from two completely different dimensions, which have completely different properties with no in-

terrelations between them, or, at most, a relationship mediated solely by an external element.

Despite a reductive interpretation of the mind-brain relationship proclaimed by some contemporary philosophers [3], such a dualistic approach to human identity is increasingly criticized by contemporary neuroscience and by the neuroethical and neurophilosophical understanding emerging from it [4]. We can say that the present *Handbook of Neuroethics* is an example in this direction. Contemporary neuroscience increasingly shows that the special feature of the human brain is its plasticity and its relationality: the genetic and neuronal endowment of the human being is deeply shaped through his own epigenetic, i.e., cultural, influence [5]. Starting from this scientific premise, neuroethics and neurophilosophy can be developed as non-reductionist cultural endeavors [6, 7]. Particularly relationality is an essential feature of the brain. This quality is as such not explainable in reductionistic terms: the neural processes that organize the external processes in relational terms cannot be exactly located in the brain because they are the result of the mutual interaction of different cerebral areas. The question regards not a specific neural content but rather a specific neural form, or better a specific neural organization [8].

Thus, at the beginning of the 21st century, neuroethical and neurophilosophical reflections are stressing a theoretical approach to the brain's formal elements and organization, i.e., to its plasticity, relationality and complexity, as a possible common ground for a dialogue between different perspectives. All these points are stressed and analyzed in the *Handbook of Neuroethics*. We would add that a philosophy of the brain is what is needed so that neuroethics may better develop a conceptual reconciliation of dissonant visions [9].

The division between fundamental neuroethics and practical or applied neuroethics is well known [1]. The former concerns the impact of neuroscience on our ethical practice and concepts, e.g., identity, consciousness, and free will. For this reason it has been defined as a “neuroscience of ethics”. The latter focuses on the ethical implications of contemporary neuroscientific applications, e.g., neuroimaging, lie-detection, and mind reading. For this reason it has been defined as an “ethics of neuroscience”. An ethics of neuroscience seems to be the most popular meaning of neuroethics, at least among the general public. Yet a proper ethics of neuroscience can be developed only by beginning from a theoretical assessment of the impact of neuroscientific language and categories on ethics, i.e., from an adequate fundamental epistemological grasp of neuroethics.

Besides the two aforementioned meanings of neuroethics, a third possible development is that of theoretical neuroethics, which in the words of Georg Northoff



focuses on the following questions: “How does a particular ethical concept, which was presupposed in neuroethics, impact both the practical issues of its application in neuroscience and the study designs for the investigation of its neural correlates? And how do the empirical findings in both ethics of neuroscience and neuroscience of ethics impact the definition of the ethical concept in question?” [10]. Theoretical neuroethics focuses on the mutual relationship between neuroscience and ethics thereby promoting an interdisciplinary approach. Generally speaking, what is increasingly stressed is the extra-scientific premises and impact of neuroscientific language. As recently outlined by *Critical Neuroscience* [11], the epistemological studies of the 20th century have shown that science cannot be explained solely by a positivist objectivity. Scientific knowledge is in some ways the result of social mediation and construction. Thus, in order to improve the dialogue between different perspectives, a potentially fruitful declination of neuroethics is as an epistemological assessment of neuroscience, i.e., a critical reflection about its premises, results, possibilities and uncertainties [12]. From a neuroethics that is adopted as a meta-scientific assessment of neuroscience there emerges an evolutionary and developmental perspective which locates the human brain and mind within a biosocial framework: in this perspective a dialogue between different values may be encouraged. A non-reductionist approach to the human being seems in line both with recent developments of neuroscience and with the need of keeping the human, i.e., of respecting the human dignity assumed as a meta-cultural and meta-ethical property of the human as such. A complex and plastic identity gives us an ethical tool for respecting human dignity.

Even though not all explicitly assessed in the present book, all these points seem to be in line with it: we need to start from the brain in order to understand ourselves, our practices and our societies. The urgency in neuroethical and neurophilosophical reflection is to increase the knowledge of the brain starting from neuroscience, avoiding the temptation to simply refer what neuroscience says but rather trying to critically think about it.

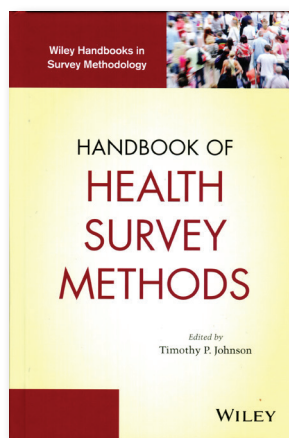
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HANDBOOK OF HEALTH SURVEY METHODS

Timothy P. Johnson (Ed.).
Hoboken, NJ: Wiley; 2015.
816 + xxiv p.
ISBN: 978-1118002322
\$ 150,00.

Information on health conditions, risk factors, health-care conditions and utilization is essential to plan, conduct, and evaluate public health programs. It is crucial also to inform policies, regulations, and legislation and to conduct research on determinants and consequences of health and health care.

Health is a complex phenomenon with a large social component: health conditions include many components, from the physiologic status to psycho-social aspects. This complex construct requires multiple indicators and methodologies for adequate measurement. Also risk factors and determinants of health are varied and include environmental exposure, economic conditions, social characteristics, individual behaviours. Health care conditions and utilization affect the incidence, development, and impact of health conditions.

Most of the information on these topics is collected by health surveys.

Surveys differ in contents, data collection methodologies, sample design. Some surveys focus on one particular aspect of health, while others consider several aspects at the same time. Nevertheless, the main criteria that guide surveys' implementation are common.

Evidence-based methods are crucial to monitor trends in health conditions and behaviours.

The *Handbook of Health Survey Methods* collects, organizes and summarizes current knowledge regarding

the design and conduct of quantitative health surveys into a single book.

The volume is organized into 29 chapters, by 54 health survey experts. After a chapter offering an overview of the evolution and development of health survey methods over the last two centuries, the following chapters are collected into five sections: Design and sampling issues, Measurement issues, Field issues, Health surveys of special populations, and Data management and analysis.

Each chapter illustrates the problem, defines the concepts, examines their implications and provides a practical resolution.

Sample design, modes of data collection, selection of participants, data linkage and many other design issues are described both at the general level and in specific fields and populations.

The extent of the topics is significant of the multidimensional character of the issue: in the last decades the field of public health has gone beyond the biomedical focus on diseases to the complementary scientific enquiry, joining biomedical, social and life sciences.

Some chapters seem based predominantly on the United States situation. For example, the chapter on ethical considerations in collecting health survey data refers mainly to the federal law about informed consent, privacy and confidentiality. Probably the book would have benefited from a wider analysis of health surveys performed in less developed countries. Yet, cross-cultural dimension is also considered (a chapter is entirely devoted to it). Nowadays there is a great interest in comparing health status and health care systems across countries: policymakers and health programs can use health surveys of other countries to improve strategies to advance health status. Moreover, variation in disease rates across countries can be used also to understand disease aetiology.

The Editor has assembled a remarkably comprehensive and balanced set of chapters and provide insightful instructions to the challenges faced by public health researchers and practitioners who deal with health surveys.

The extensive and analytical coverage will make the book an extremely valuable resource: the new handbook will certainly emerge as essential reading for anyone deals with health surveys.

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**IL BONOBO E L'ATEO
In cerca di umanità
tra i primati**

Frans de Waal.
Raffello Cortina Editore;
2013. 334 p.
ISBN 978 88 6030 600 5.
€ 28,00.

*[The bonobo and the atheist:
in search of humanism among
the primates]*



**A COME ANIMALE.
VOCI PER UN BESTIARIO
DEI SENTIMENTI**

Leonardo Caffo
e Felice Cimatti (Eds).
Milano: Bompiani;
2015. 320 p.
ISBN 978 88 452 7857 0.
€ 13,00.

*[A as Animal. Entries for
a bestiary of sentiments]*

The relationship between human and non-human animals has changed in the last decade. More attention is devoted to the rights and welfare of the other animals, and one example is the recent European Directive on the protection of animals used in experimental procedures. Animals are more and more part of our lives: the number of pets has increased, and the number of animals used in research laboratories is still significant.

These two books represent two different aspects of these interactions. Frans de Waal is the word known primatologist, who has inspired us to think about non-human primates as witness of the evolutionary origins of our morality. In this book, he returns on this topic, with his usual charming style, full of examples and not shy of venturing in areas outside science. This new book deserves reading by a wide audience, but we advice anyone involved in animal research or in bioethical committees to have a good look at it. It is both very entertaining and informative.

Leonardo Caffo and Felice Cimatti's edited book, instead, is a collection of little essays discussing different views, from different disciplines, our relationship with other animals.

Both books are a sign of the need to shorten the distance between us and creatures which are so much part of our lives, everyday in different contexts.

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BIOLOGIA MARINA MEDITERRANEA

Prefazione di Aldo

Cosentino

Società Italiana

di Biologia Marina (SIBM)

Genova: Erredi Grafiche

Editoriali

Vol. 17, suppl. 1, 2010,

parte II (p. 387-828)

[*Marine biology in the Mediterranean sea. Checklist of the flora and fauna in the Italian sea*]

This *opus magnum* (828 pages, equipped with two very useful indices, the first for animal genera and species, the second for non animal genera and species) represents a state-of-the-art report, which is very useful for behavioural toxicologists and for both land and water ecotoxicologists.

As we previously reported in the *Annali dell'Istituto Superiore di Sanità* [1-3], this can be fully exploited for monitoring the presence, absence, rarity and overall trends for a variety of species, which may well represent "sentinel populations", possibly indicative of presence, in the marine ecosystem, of toxicants putting at risk human health of the sympatric populations.

In the past, this has been the case in particular for neurotoxicants acting both at the central and peripheral systems, damaging, inhibiting or completely stopping the reproductive capabilities of sensitive, therefore fragile, animal species. Moreover, neurotoxicants acting at the brain level reportedly affect animal behaviour patterns.

Regular monitoring and/or reporting of anecdotal

evidence of abnormal behaviours is another important and fruitful strategy to detect even very small quantities of agents possibly noxious for the human behaviour, particularly in the case of vulnerable subjects such as pregnant women, fetuses, neonates, adolescents, ageing people and patients affected by a variety of minor and major neuropathological conditions.

Finally, any marine animal penetrating the human food chain (a high number of taxonomic groups are enlisted in this book) may represent possible hazard for human health, therefore public health institutions are in need of the massive information presented here.

This volume is frankly recommended for the bookshelf of veterinarians, experts of human nutrition, health planners and students of zoogeography, the latter when interested in edible marine species.

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