

Afterword

We are at the beginning of an era of renewed interest in neurosurgery for psychiatric illness. The keyword of this new era of psychosurgery is “neuromodulation,” as opposed to the neuro-ablation of the past. Neuromodulation makes use of a surgical technique called Deep Brain Stimulation (DBS). This new technique is promoted, and perceived, as being non-destructive, adaptable, and especially “reversible.” Psychosurgery, including stereotactic psychosurgical ablative procedures—which had been thrown out through the door, sometimes reminding of the idiomatic expression of throwing the baby with the bath water—is now re-entering through the window of “neuromodulation,” a disguise meant to reassure the public of the innocuity and leniency of this “modern” procedure.

The great contribution of this book by neurosurgeon Marc Lévêque is to put this new emerging era of non-ablative surgery into a historical, scientific, and ethical context. Reading this book is like reading an anthology, or rather an encyclopaedia of the field of psychiatric surgery, spanning more than a century. This is a work with an unprecedented degree of erudition and knowledge, and the subject is presented in a didactic, scholar, and scientific manner, and is extensively referenced and illustrated. If only one book is to be read by anybody interested in this field, regardless of specialty, this is The Book to read.

Where is the field now going? One may reflect upon the fact that, as described in the book, modern DBS for psychiatric illness was pioneered already in 1999 with DBS for obsessive compulsive disorder (OCD) and DBS for Tourette syndrome. A few years later, DBS for major depression was introduced. Today, there are about eight published brain targets for DBS in OCD, ten published brain targets for DBS in Tourette, and nine published brain targets for DBS in depression. Some of these brain targets overlap each other, and none of the brain targets and indeed none of the psychiatric indications for DBS is yet “established,” despite the plethora of scientific papers published in the last 14 years of activity in the field. Despite this lack of consensus about DBS in these three major psychiatric illnesses, DBS is now trialled or advertised as a potential treatment for drug addiction, anorexia nervosa, post-traumatic stress disorder, and dementias. Lately, an alarming qualitative jump has occurred in that DBS is being considered as a tool, not for diseases and illnesses, but for enhancement of

cognition in normal people. Finally, that alarming jump has now approached an abyss as illustrated in a recent article published in the prestigious Journal *BRAIN*, in which “scientists” suggested the theoretical use of DBS to treat “antisocial behaviour” and to improve “morality”!

All this shows that the prophecy of Dr. Joseph H. Friedman from Rhode Island in 2004 is being confirmed. Friedman wrote then: “Now that DBS means that psychosurgery is reversible, we no longer have to worry about permanent harm. On the other hand, now that psychosurgery could be readily available, potentially for a large number of conditions, we have a lot more to worry about.”

Indeed if the field continues in this direction we will have a lot more to worry about, and we may witness then another setback for surgery for psychiatric illness. The tragedy of the past is well illustrated in this book in relation to old times DBS as practiced in Tulane University in the 1950s through the 1970s, and that had been condemned by Beaumeister in 2000 as being unethical “by yesterday’s standards”). This tragedy of the past may well become the farce of the future.

Neuromodulation should not be allowed to become neuro-manipulation, and the DBS technique as such is neither always “reversible,” nor is it per se necessarily more “ethical” than well-performed stereotactic lesions such as anterior capsulotomy or cingulotomy, in the treatment of refractory psychiatric illness. The “second chance” of psychosurgery—as Benabid put it in 2006—and that is permitted by DBS, should not be allowed to degenerate into a farce. One should bear in mind the famous quote attributed to the Great Swedish neurosurgeon Lars Leksell: “a fool with a tool is still a fool.” This book of Marc Lévêque will invite those who read it to a profound reflection about the field of psychiatric surgery, and about the moral and ethical guardrails (*garde-fous*) needed, if real severely ill patients who suffer from real diseases of the mind that are refractory to all other non-surgical treatments, are to benefit from a justified, well-performed, well-evaluated stereotactic procedure, be it stereotactic DBS surgery, or stereotactic ablative surgery.

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