Foreword

All of us have had the experience of walking through a garden, by a river or ocean, or climbing a mountain and finding ourselves simultaneously calmed and reinvigorated, engaged in mind, refreshed in body and spirit. The importance of these physiological states on individual and community health is fundamental and wide-ranging. In 40 years of medical practice, I have found two types of non-pharmaceutical "therapy" vitally important for patients with chronic neurological diseases: music and gardens. I have recently been thinking and writing a lot about music and I have just published a book called "Musicophilia" a title I chose as a reference to E. O. Wilson's term "biophilia." Indeed, I think there is a biological need and craving that goes across all cultures and all times both for music and for greenness. I would even suggest that a sort of subtype of biophilia may be hortophilia, or a special desire for gardens. I can't quite claim that hortophilia is in the genes because, of course, gardens have only existed presumably since the beginnings of agriculture. But I have often seen the restorative and healing powers of nature and gardens, even for those who are deeply disabled neurologically. In many cases, gardens and nature are more powerful than any medication.

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I have one friend with moderately severe Tourette's syndrome—in his usual, busy, city environment, he has thousands of tics and verbal ejaculations each day—grunting, jumping, touching things compulsively. I was therefore amazed once when we were hiking in a desert to realize that his tics had completely disappeared. The remoteness and uncrowdedness of the scene, combined with some ineffable calming effect of nature, served to defuse his ticcing, to "normalize" his neurological state, at least for a time.

Another patient, an elderly lady with Parkinson's disease, often found herself "frozen," unable to initiate movement — a common problem for those with parkinsonism. But once we led her out into the garden, where plants and a rock garden provided a varied landscape, she was galvanized by this and could rapidly, unaided, climb up the rocks and down again.

I have often seen patients with very advanced dementia or Alzheimer's disease, who may have very little sense of orientation to their surroundings. They have often forgotten, or cannot access, how to tie their shoes or handle cooking implements. But put them in front of a flowerbed with some seedlings, and they will know exactly what to do—I have never seen such a patient plant something upside down.

The patients I see often live in nursing homes or chronic-care institutions for decades, and so the physical environment of these settings is crucial in promoting their well-being. A number of these institutions have actively used the design and management of their open spaces to promote better health for their patients. For example, Beth Abraham Hospital in the Bronx, New York (which opened in 1920) for the first victims of the sleeping sickness — encephalitis lethargica) is where I saw the severely parkinsonian post-encephalitic patients of "Awakenings." At that time the hospital was a pavilion surrounded by large gardens. As it expanded to a 500-bed institution, it swallowed most of its gardens, but it did retain a central patio full of potted plants that remains very crucial for the patients. There are also raised beds so that blind patients can touch and smell and wheelchair patients can have direct contact with the plants. I also work with the Little Sisters of the Poor, who have nursing homes all across the world. This is an order originally founded in Brittany in the late 1830s, and it spread to America in the 1860s. At that time it was common for an institution like a nursing FOREWORD

home to have a large garden and sometimes a dairy as well. Alas, this is a tradition which has mostly vanished, but which the Little Sisters are trying to reintroduce today. At the Little Sisters of the Poor in Queens, when it becomes warm enough, all of the residents like to be out in the garden. Some of them can walk by themselves, some need a stick, some need a walker, and some have to be wheeled. But they all want to be in the garden.

Clearly, nature calls to something very deep in us, and biophilia, the love of nature and living things, is an essential part of the human condition. Hortophilia, the desire to interact with, manage, and tend nature, is also deeply instilled in us. The role that nature plays in health and healing becomes even more critical for people working long days in windowless offices, for those living in city neighborhoods without access to green spaces, for children in city schools, or those in institutional settings such as nursing homes. The effects of nature's qualities on health are not only spiritual and emotional, but physical and neurological. I have no doubt that they reflect deep changes in the brain's physiology, and perhaps even its structure. As a physician, I take my patients to gardens whenever possible; as a writer, I find gardens essential to the creative process.

I was honored to give the keynote address at the first Meristem Restorative Commons Forum in 2007 and I am honored to introduce this volume, which is inspired by that conference. The proceedings from the Forum, and related case studies included here, mark an important step in fostering new interdisciplinary collaborations in the design and use of common urban green spaces to support public health and well-being.

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