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Sommario/riassunto	"This eBook is published at an opportune time in the history of prosthetics. Particularly, recent technological advances in actuation, microelectronics, batteries, and fabrication methods have fueled the emergence of upper extremity prostheses with far greater movement capability than was previously possible. With the ability to provide a large number of possible movements, such prostheses offer great promise for enhancing the ability of amputees to better perform the activities of daily living. Use of this enhanced capability, however, requires in most cases a user interface that enables efficient and intuitive access to the multiple movements offered by these prostheses. Thus, leveraging advances in motor functionality in upper extremity prostheses is fundamentally dependent on corresponding advances in user interface and control. The appropriate availability of possible movements and the nature and capability of the control interface are strongly coupled. Introducing additional movement capability will in many cases impose a greater control burden on the user. Although neural interfacing has the potential to supply a rich set of control information, the amount of control information is likely (for the foreseeable future) to be far less than that employed within the native limb. A single-degree-of-freedom hand, for example, is limited in

movement capability, but is relatively easy for an amputee to control. A twenty-degree-of-freedom hand, conversely, has a great deal of movement capability, but may be difficult for an amputee to dexterously control. Thus, the extent of appropriate movement capability of the prosthesis is highly dependent on the control interface approach. Understanding the balance of movement capability and control burden requires knowledge of advances in both areas, and additionally requires knowledge of appropriate assessment tools with which to measure functional efficacy.