



# The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand

*Göran Lundborg*

Download now

[Click here](#) if your download doesn't start automatically

# The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand

Göran Lundborg

## **The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand** Göran Lundborg

This book presents the human hand from an overall perspective – from the first appearance of hand-like structures in the fins of big fishes living millions of years ago to today's and the future's mind-controlled artificial hands.

Much focus is given to the extremely well-developed sensation of the hand, its importance and its linkage to brain plasticity mechanisms. How can active hands rapidly expand their representational area in the brain? How can the sense of touch substitute for other deficient senses, such as in Braille reading where hand sensation substitutes for missing vision? How can the mere observation of active hands, belonging to others, activate the hand area in the observer's own brain and what is the importance of this phenomenon for learning by imitation and the understanding of other peoples' actions, gestures and body language? Why are some of us left-handed and what are the consequences from cultural and physiological viewpoints? Why does phantom sensation and phantom pain occur after hand amputation, and what can we do about it? Why can salamanders regenerate new extremities while humans can not? Is it possible to transplant a hand from a diseased individual to an amputee? Can artificial robotic hands be controlled by our mind, and can they ever gain the role of a normal hand? What role did the hand and the brain play during evolution in tool construction and development of language and cognitive functions? The hand has a high symbolic value in religion, literature and art and our hands have a key role in gestures and body language.

*The Hand and the Brain* is aimed at anybody with interest in life sciences, in the medical field especially hand surgeons, orthopaedic specialists, neurologists and general practitioners, and those working in rehabilitation medicine and pain treatment. The original Swedish version of *The Hand and the Brain* has also become very popular among physiotherapists, occupational therapists, psychologists, and among a general population with an interest in science.



[Download The Hand and the Brain: From Lucy's Thumb to the T ...pdf](#)



[Read Online The Hand and the Brain: From Lucy's Thumb to the ...pdf](#)

## **Download and Read Free Online The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand Göran Lundborg**

---

### **From reader reviews:**

#### **Johanna Hernandez:**

Here thing why this kind of The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand are different and trustworthy to be yours. First of all reading a book is good however it depends in the content of it which is the content is as tasty as food or not. The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand giving you information deeper and different ways, you can find any publication out there but there is no book that similar with The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand. It gives you thrill reading through journey, its open up your own personal eyes about the thing that happened in the world which is perhaps can be happened around you. You can bring everywhere like in playground, café, or even in your means home by train. Should you be having difficulties in bringing the paper book maybe the form of The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand in e-book can be your alternate.

#### **Nona Whitehouse:**

A lot of people always spent their own free time to vacation or go to the outside with them friends and family or their friend. Do you realize? Many a lot of people spent many people free time just watching TV, or playing video games all day long. If you want to try to find a new activity that is look different you can read a new book. It is really fun for you. If you enjoy the book that you just read you can spent the entire day to reading a reserve. The book The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand it is quite good to read. There are a lot of folks that recommended this book. These folks were enjoying reading this book. If you did not have enough space to develop this book you can buy typically the e-book. You can more easily to read this book from the smart phone. The price is not to fund but this book possesses high quality.

#### **Raquel Black:**

Many people spending their moment by playing outside along with friends, fun activity using family or just watching TV the whole day. You can have new activity to shell out your whole day by examining a book. Ugh, do you consider reading a book will surely hard because you have to take the book everywhere? It fine you can have the e-book, bringing everywhere you want in your Smart phone. Like The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand which is getting the e-book version. So , try out this book? Let's view.

#### **Willie McCorkle:**

You may get this The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand by check out the bookstore or Mall. Just simply viewing or reviewing it could to be your solve problem if you get difficulties to your knowledge. Kinds of this publication are various. Not only by means of written or printed but also can you enjoy this book simply by e-book. In the modern era just like now, you just looking

of your mobile phone and searching what your problem. Right now, choose your ways to get more information about your e-book. It is most important to arrange you to ultimately make your knowledge are still change. Let's try to choose right ways for you.

**Download and Read Online The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand Göran Lundborg #68B1YIVLHSN**

# **Read The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand by Göran Lundborg for online ebook**

The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand by Göran Lundborg Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand by Göran Lundborg books to read online.

## **Online The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand by Göran Lundborg ebook PDF download**

**The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand by Göran Lundborg Doc**

**The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand by Göran Lundborg MobiPocket**

**The Hand and the Brain: From Lucy's Thumb to the Thought-Controlled Robotic Hand by Göran Lundborg EPub**