Battro's book recounts the case of Nico, a student and subject at his research laboratory. The author, a cognitive psychologist interested in educational and developmental issues associated with brain trauma, meditates upon what that case may mean for various theories of human mental life and development. Nico, born with a congenital defect of the right half of his brain, suffered from partial motor paralysis to his left side and debilitating epilepsy before, at age 4 years, undergoing a functional hemispherectomy. In this procedure, doctors removed areas of his cortex and all of the temporal lobe on the right side. The remaining portions of the right hemisphere were left intact but completely disconnected from the brain stem and left brain, effectively reducing his brain matter by one half. Obviously, this is an extreme intervention, and a rare one; Battro estimates that there are perhaps 100 persons worldwide who have undergone such an operation.

From a medical point of view, the operation was a success, producing a complete cessation of seizures. More importantly yet, and as the title of the book suggests, Nico appears to have lost very little, if anything, in the process. Indeed, he retained his ability to speak throughout the recovery period, and was up and walking again within days of the surgery. Although some difficulties persist in terms of left-sided vision and motor control, Nico shows no further evidence of disability, despite what initially seems a profound neurological loss. Indeed, Battro recounts that he was deeply surprised to learn of Nico's exact condition after the boy was brought to him for therapy. Nico, he reports, is an eminently likable boy, and furthermore an intelligent one, attending the usual classes for a child his age, and placing at the top among his peers in terms of both spoken and written language.

These observations lead Battro to his central question: "How can half a brain sustain a full mind?" (5). As he points out, the half-brained person who retains nearly full capacity raises a number of hard questions for theories relating "sidedness" to specific brain functions, and connecting brain size directly to capacity. His point is made quite strongly when he reminds us that a half-brained person like Nico actually has less functioning brain matter than does the average microcephalic, but without any of the attendant serious deficits. Since Nico, age 9 at the time of writing, has shown normal acquisition of mental skills, his case poses a serious challenge to any theory that would too simplistically link usual brain-structure development to this acquisition process. Battro argues, that hemispherectomy is more than a neurological lesion... [but] amounts to rebuilding a new brain [as the] half hemisphere is functionally transformed into a whole brain again (25).

Indeed, the case study here is an interesting puzzle that deserves to be considered by anyone interested in relations between learning and mental capacity. That a half-brained child can develop more or less normally suggests a number of lines of thought. It might be argued, for instance, that the right half of the brain, which Nico lost, is pretty much unnecessary, and that the advanced "mental organs" are all in the left half, or that the brain contains massive redundancy, with functional areas duplicated in each half. In either case, such a claim raises many puzzles about the brain's efficiency and design. Another issue concerns the mechanism that forces (or even allows) the compensatory development seen in Nico's case. At present, such a mechanism is not clearly understood; one particular question about it would be why some patients, with seemingly far less serious local brain lesions, never recover their individual capacities, whereas Nico was able to recover nearly everything even after his drastic cortical sacrifice.

One of the virtues of Battro's book is that he never suggests that he has answers to these questions where he does not. Instead, he wants simply to point out where these puzzles arise, and to suggest the great and fundamental mysteries that
The book is not highly technical, and is suited to the general reader, and at the same time contains detailed notes, with pointers to relevant literature, for those interested in following up on the scientific and medical issues raised in greater depth.

At the same time, the book is not without its positive platform. Battro is particularly interested in the use of computers as educational aids for children facing developmental challenges; however, those parts of the book that recount some of his ideas and experiences in this area are suggestive, but ultimately less satisfying. On the one hand, he writes convincingly about the benefits of computers for someone like Nico—for instance, while his motor skills make handwriting difficult, the use of a computer keyboard allows him to demonstrate his real capacity for written language. On the other hand, his enthusiasm for computers and other "neural prostheses" leads him to some more debatable suggestions, and to some leaps in argumentation. For Battro, the fact that "the human cortex is so well-endowed as to be able to accomplish the same cognitive feats with only half of its neurons," implies that it might then be possible, "with the help of some external computational aids, for the brain to attain incredible levels of competence" (12). This is interesting, but puzzling. Battro never commits himself to any particular understanding of what is meant by an "incredible" level of human cognitive ability, nor does he claim that such ability would necessarily follow from the use of computers. Still, the contained implication that technological advances can lead to expanded human mental ability goes beyond the little evidence he provides, and does not obviously follow from the natural healing processes evidenced in Nico. Furthermore, the idea of "untapped abilities" in the brain reminds this reader of the sorts of naive theories of human mental ability—the mythical belief, for instance, that human brains use only some small percentage of their real capacity—that Battro himself calls into question.

Furthermore, Battro's arguments about the use of computers rely on a somewhat dubious distinction. In his later chapters, he describes the sort of "cortical shift" apparently induced by technologically-mediated interactions with the world, making much of what he calls the "different cognitive strategies" involved in the use, for instance, of word processing programs rather than other means of producing written language. But the distinction, drawn on page 59, between Nico's use of a "machine" in his connection to the environment, rather than what Battro calls "the handwriting shortcut," seems to overstate the advance represented by the switch to computer composition. Battro does not make clear why use of a computer is not simply the use of a different machine than employed when one uses pen and ink, or indeed any writing tool. While computers are clearly different than other mechanical aids in their particulars, it is not clear that this difference is one that makes a difference. While Battro raises some interesting possibilities when he considers the use of computers to allow persons to perform tasks they otherwise could not, or using different modalities than usual—programs that allow persons to draw pictures using written commands, for instance—the claim that this points to a fundamental alteration in human cognitive abilities is neither convincing, nor completely clear, and occasionally slips into metaphors, like the "brain wide web," which obscure more than they reveal. All in all, the book's positive proposals are less interesting than the many questions it raises.

Finally, it should be noted that Half a Brain Is Enough can be somewhat unsatisfying. A slim volume at only 90 pages of text, it contains far more recapitulation than is necessary or desirable in such a short work. Each chapter reads as if it may have once been a stand-alone piece, and this induces an experience of repetitiveness. As indicated, it does raise a number of interesting questions, and so can provide a fine starting place for someone interested in cognitive and developmental psychology. At the same time, however, more facts concerning the case—particularly about Nico's process of cognitive development—could easily have been included, even in this short space, by excluding some of the repeated materials, and probably ought to have been. Battro's style, too, will not be to all reader's tastes. He speaks in the personal and narrative manner that has become popular after the success of the case-study style popularized most notably by Oliver Sacks; unfortunately, Nico's personality is not rendered with the literary eye to detail of that author, and so the boy remains something of an abstraction. As a result, while those looking for a purely scientific recounting of a medical case may be put off by the personal tone, those looking for an engaging presentation of the human character of the half-brained condition are also likely to find themselves wanting more than they are given.