Inventing Iron Man: The Possibility of a Human Machine

E. Paul Zehr
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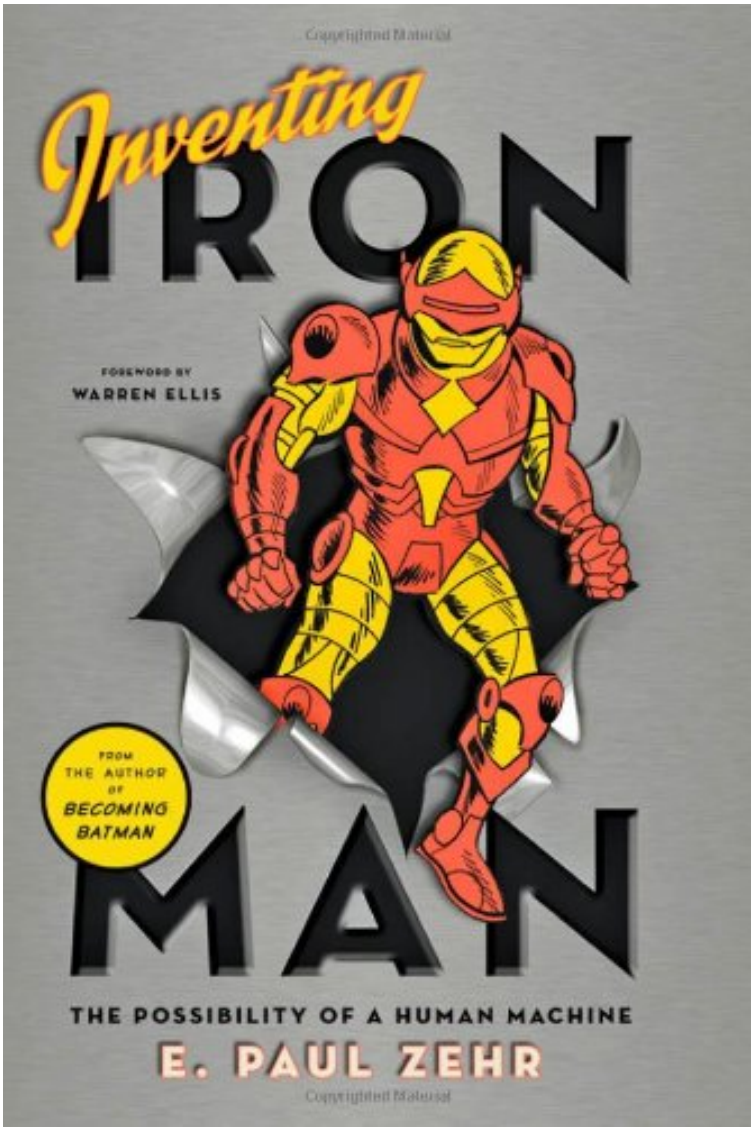

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E. Paul Zehr : Inventing Iron Man: The Possibility of a Human Machine before purchasing it in order to gage whether or not it would be worth my time, and all praised Inventing Iron Man: The Possibility of a Human Machine:

1 of 1 people found the following review helpful. Could Iron Man survive the suit?By Bernie GourleyAs the title suggests, this book examines whether Iron Man could exist in the real world. As with Michio Kakus book Physics of the Impossible, answering the question involves defining the various meanings of impossible.One way to parse the question is, Is Iron Man possible today given the existing state of technology? In and of itself, this question is of

limited interest because the answer is, no. Theres certainly a demand, and so if Iron Man could exist given current technology, he probably would. Thats not to say it isnt interesting to learn about what technologies are holding us back and where the cutting edge of relevant technologies liesboth of which are addressed by the book.Still, a more interesting inquiry is, Will Iron Man ever be reality given the physical laws that we know to govern the universe? While more intriguing, its also a harder question to definitively answer. Its impossible to foresee all the technological developments that might come along to answer the seemingly insurmountable challenges (e.g. Tony Starks inevitable Traumatic Brain Injury (TBI).) The book deals with the critical question of what challenges would have to be overcome for Iron Man to be reality.As Zehr suggests, the appeal of Iron Man is that hes considered to be among superheroes for the common man. Like Batman, the sufficiently bright and diligent nerd may fantasize that, That could be me. You or I cant be Superman or Wolverine, but given enough money, smarts, and training we could be Batman, oreven betterpilot the Iron Man suit. Put in this light, the book may seem like just another frivolous attempt to capitalize on the popularity of superheroes to sell books. However, theres actually a great deal of food for thought packed in the book. Like others, I read the book because its title is Inventing Iron Man and not Neuro-motor control of a self-propelled armor system or some other suitably scholarly title.Dr. Zehr has the bona fides to delve into this topic. He is a Professor who investigates questions of how the nervous system controls movement. That subject may not constitute the sum total of critical concerns, but its one of the most important challenges. For Iron Man to move the way he does in the movies and comic books, Tony Starks impulses to move have to be transmitted seamlessly to the servo-motors that move the suit. From dodging Col. Rhodes (i.e. War Machines) punches to ducking RPGs, Stark cant be quick enough if he has to manually steer the device. Then, of course, theres the issue of feedback. Any neophyte meditator whos had his or her foot fall sound asleep will know how difficult it is to walk surefootedly when one cant feel anything through ones foot.[Iron Man 3 movie spoiler commentary in this paragraph.] One of the most damning challenges for making Iron Man a reality is the high probability of severe concussions. Lets say you make the suit out of a material that is virtually indestructible? This may be possible. However, the pilots mushy brain is still sloshing around inside that impenetrable armor. One can remotely pilot the suit in order to negate this (as has been done in the comic books and the third movie), butat that pointis it still Iron Man? I know from a writers perspective its a lot harder to maintain tension if theres nothing human on the line. In the third movie about 30 autonomously piloted suits get wiped out and the viewer doesnt carethe only source of tension is that Tony Stark is without armor half the time.Some of the most interesting discussions are about where the current state of the art lies with respect to: a.) direct mind control over mechanical systems; b.) a flying suit; and c.) robotic movement enhancers. Zehr conducts interviews with those engineers and technologists involved in such technologies, and finds out where we are presently. Letter a above seems to be the least developed of the three technologies, but they are all active lines of research.I enjoyed this book and found it interesting. I think anyone who is interested in the state of technology and its limits will find it a nice pop-sci introduction to the subject. The use of superheroes as a pedagogic device may be overdone, but it continues to work because we are fascinated by the edge of possibility, and thats what superheroes represent.1 of 1 people found the following review helpful. Five StarsBy whitetigerBuilding one myself in gargage0 of 0 people found the following review helpful. Five StarsBy Greg HammWish I had the money and time to build a suit!

Tony Stark has been battling bad guys and protecting innocent civilians since he first donned his mechanized armor in the 1963 debut of Iron Man in Marvel Comics. Over the years, Starks suit has allowed him to smash through walls, fly through the air like a human jet, control a bewildering array of weaponry by thought alone, and perform an uncountable number of other fantastic feats. The man who showed us all what it would take to become Batman probes whether scienceand humankindis up to the task of inventing a real-life Iron Man.E. Paul Zehr physically deconstructs Iron Man to find out how we could use modern-day technology to create a suit of armor similar to the one Stark made. Applying scientific principles and an incredibly creative mind to the question, Zehr looks at how Iron Mans suit allows Stark to become a superhero. He discusses the mind-boggling and body-straining feats Iron Man performed to defeat villains like Crimson Dynamo, Iron Monger, and Whiplash and how such acts would play out in the real world. Zehr finds that science is nearing the point where a suit like Iron Mans could be made. But superherodom is not just about technology. Zehr also discusses our own physical limitations and asks whether an extremely well-conditioned person could use Iron Mans armor and do what he does.A scientifically sound look at brain-machine interfaces and the outer limits where neuroscience and neural plasticity meet, Inventing Iron Man is a fun comparison between comic book science fiction and modern science. If youve ever wondered whether you have what it takes to be the ultimate human-machine hero, then this book is for you.

"Like a true costumed hero, Zehr masks learning in the guise of pop culture enthusiasm... a perfect source to learn about the history of Iron Man and the strength and limits of the human body and brain." (www.whatistechnoagain.com)"Zehr's university-based research includes neuroplasticity, akin to neural rewiring, associated with exercise training and rehabilitation. This expertise, combined with Zehr's childlike curiosity and proficiency in martial arts, makes Inventing Iron Manalong with Becoming Batman before ita fascinating exploration

of human potential." (Christopher Wanjek LiveScience.com)"A unique and much recommended read for anyone with an interest in the reality of super science." (Midwest Book)"Highly commended to all who enjoy a look into the world of superheroesbut science nerds will like it, too." (Steven King The Pilot)"The character of Iron Man represents a compelling and culturally popular interpretation of what may be possible in the future with enhanced prosthetic devices." (Choice)"A fine pick for science fiction and science holdings alike." (Midwest Book)"Back in the sixties, when I first dreamed up the concept of Iron Man, I thought, 'What if a man had a suit of armor, like the knights of oldbut modern armor that housed all sorts of miniaturized, technical weaponry? Such a man would seem to be the ultimate superhero.' At first, I didn't give much thought to what that suit of armor might mean to the man insidehow it might affect his body and/or his brain and subtly blur the line between human and machine. But now, almost 40 years later, E. Paul Zehr has tackled that very subject. Inventing Iron Man is his fascinating vision of the real-life implications of my original concept." (Stan Lee, comic icon and creator of Iron Man)"E. Paul Zehr, surely one of the coolest of professors, has done something interesting, enlightening, and maybe just a bit quixotic. He has built a bridge between the fantasy science of superhero comics and the eyes-front innovations of real-life technological innovators. It is a primer on what's possible now and what might soon become possible in our world and what Iron Man's been up to in his." (Dennis O'Neil, Iron Man writer and editor)"This wonderful book lays out... the only true way to see the Iron Manas a prosthesis... a book that educates and delights. I hope you enjoy it as much as I did." (from the foreword by Warren Ellis)About the AuthorE. Paul Zehr is a professor of neuroscience and kinesiology at the University of Victoria, British Columbia, and the author of Becoming Batman: The Possibility of a Superhero, also published by Johns Hopkins. For more information about finding your inner superhero, visit www.inventingironman.com.