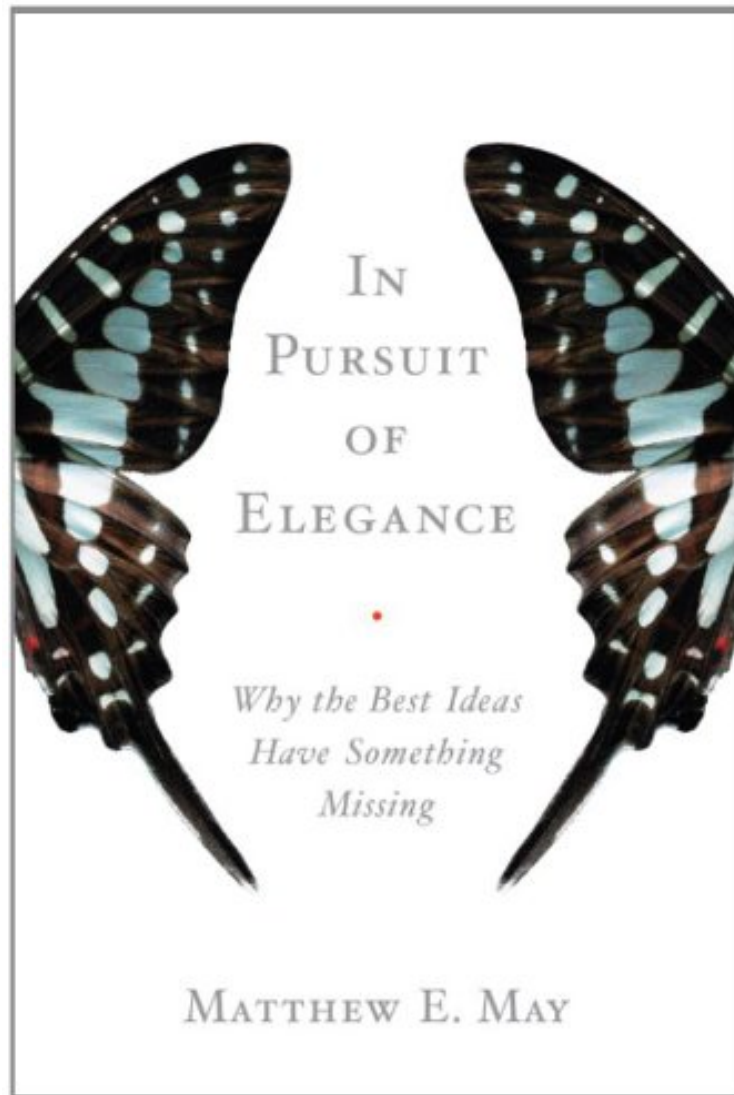


In Pursuit of Elegance: Why the Best Ideas Have Something Missing

Matthew E. May

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Matthew E. May : In Pursuit of Elegance: Why the Best Ideas Have Something Missing before purchasing it in order to gauge whether or not it would be worth my time, and all praised In Pursuit of Elegance: Why the Best Ideas Have Something Missing:

4 of 5 people found the following review helpful. Collection of stories related to elegance By Bas Vodde In pursuit of elegance is sort-of a follow-up on "The Elegant Solution" by the same author in which the author tries to discover what elegance is. The book is quite typical of its kind, where the author tries to make an interesting point by sharing lots of short stories and tries to extract deeper meaning out of them. The first chapter is a roadmap chapter where the author first tries to define what "elegance" means in the first place and then based on that definition, he can pursue the

separate elements of elegance. Eventually he comes up with the definition: Symmetry, Seduction, Subtraction and Sustainability. The definition feels a bit arbitrary to me, but the rest of the book contains chapters for each of these. The rest of the book is structured around stories... mostly not experiences but stories the author has read or researched. The stories are often interesting though. Examples of stories are Pollack paintings and the discovery of their fractal nature. A Dutch traffic square that become simpler when removing traffic signs. The sudden ending of a TV show and why that might have been a good idea. A French company called FAVI that is based on less management and roles. Problems of video rental and rewinding of tapes. All stories were interesting and nice to read. The only, in retrospect perhaps, painful story relates to Lance Armstrong and his training program. I do think we can learn from that, but of course, the additional information about his doping usage makes it a lot less attractive. All in all, it was an ok book to read. I enjoyed reading it but didn't have much WOW moments in the book either. I suspect it'll go on the shelf and in a couple of years I'll need to check this review to remember the book. Good book, good stories, not very special. 4 of 4 people found the following review helpful. RamblingBy LCI get the author's point, less is more. Understated is elegant. I just wish he had taken his own advice. 4 of 4 people found the following review helpful. a much-needed book on this topicBy leidyElegance is such an important concept - it deserves a book. This one is the best I've found. It not only provides an overview and examples, but also outlines some general principles that will help your own thinking about elegance.

What made the Sopranos finale one of the most-talked-about events in television history? Why is sudoku so addictive and the iPhone so darn irresistible? What do Jackson Pollock and Lance Armstrong have in common with theoretical physicists and Buddhist monks? Elegance. In this thought-provoking exploration of why certain events, products, and people capture our attention and imaginations, Matthew E. May examines the elusive element behind so many innovative breakthroughs in fields ranging from physics and marketing to design and popular culture. Combining unusual simplicity and surprising power, elegance is characterized by four key elements—seduction, subtraction, symmetry, and sustainability. In a compelling, story-driven narrative that sheds light on the need for elegance in design, engineering, art, urban planning, sports, and work, May offers surprising evidence that “less is more” often trumps what is. In the bestselling tradition of *The Tipping Point*, *Made to Stick*, and *The Black Swan*, *In Pursuit of Elegance* will change the way you think about the world.

Advance Praise for *In Pursuit of Elegance*“*In Pursuit of Elegance* is a fascinating intellectual romp that will change the way you look at your surroundings. As he takes readers from Jackson Pollock paintings to Dutch intersections to the secret menu at In-N-Out Burger, Matt May reveals the hidden elements beneath genuine innovation. This book is surprising, compelling, and, yes, extremely elegant.”—Daniel H. Pink, author of *A Whole New Mind* and *The Adventures of Johnny Bunko*“As elegantly written as it is provocative, *In Pursuit of Elegance* makes a convincing—nay, worldview-shifting—argument that less is best.”—Ori Brafman, coauthor of *Sway*“Enlightening. Makes a compelling case for doing more with less by optimizing the expenditure of one’s assets and resources. That’s something anyone can and should put into practice.”—Kevin Hunter, president, CALTY Design Research, Inc., Toyota Design Network“*In Pursuit of Elegance*! The definitive guide to the “less is more” mind-set. I meant to only take a quick glance at *In Pursuit of Elegance*, but once I started reading it, I couldn’t stop. In a world where everything keeps getting more complicated and overwhelming, Matthew May shows us that if we start looking for things to take out, things to stop doing, and intelligent shortcuts, we will all be happier, do superior work, and live in a better world.”—Robert I. Sutton, Stanford professor and author of *The No Asshole Rule*From the Hardcover edition>About the AuthorMatthew E. May, a graduate of the Wharton School of Business, is the author of the critically acclaimed *Elegant Solution*. A popular speaker, he lectures to corporations, governments, and universities around the world on ingenuity and innovation. He spent nearly a decade advising Toyota, and his articles and profiles have appeared in *USA Today*, *Strategy Business*, the *Wall Street Journal*, and on CNN and National Public Radio. He lives in Lake Sherwood, California.Malcolm Hillgartner is an actor, author, playwright, and professional narrator. Under the name Jahnna N. Malcolm, he and his wife, Jahnna Beecham, have written over one hundred books for young readers; their musicals have played in theaters across America. His audiobook credits include works by Dean Koontz, Nelson Algren, and William F. Buckley Jr.Guy Kawasaki is the chief evangelist of Canva, an online graphic design tool. Formerly, he was an adviser to the Motorola business unit of Google and chief evangelist of Apple. He is also the author of *APE*, *What the Plus!*, *Enchantment*, and other books. Kawasaki has a BA from Stanford University and an MBA from UCLA as well as an honorary doctorate from Babson College.Excerpt. copy; Reprinted by permission. All rights reserved.Chapter OneElements of EleganceIn the autumn of 2000, two enterprising Harvard University undergraduates, Anthony Delvecchio and Jason Karamchandari, launched a Web site they called ShuttleGirl. The concept could not have been more simple: help their classmates make sense out of the comprehensively confusing campus shuttle schedule. On the site, the two gents quipped:It is needless to say that taking the shuttle can be a routine part of a Harvard student's life. ShuttleGirl wants to make this aspect of your life a bit easier. Think about it. We've all

seen the shuttle schedule. We've all seen twenty-year-olds reduced to tears when they board a Quad-bound shuttle at 10:00 PM only to hopelessly return to the Science Center at 10:25 PM, a final pre-Quad stop. Indeed, the shuttle schedule is complex in its organization. Some would even say that a working knowledge of game theory is necessary to understand the current shuttle schedule. ShuttleGirl has seen all this pain and she will stand silently no more. To Delvecchio and Karamchandari, and to the entire shuttle-going student population, for that matter, the campus shuttle schedule was an incomprehensible, incomplete, inconvenient, inaccessible, inaccurate, infuriating mess. Their thought was to deliver just enough information, just in time, in just the right way so that the shuttle rider's experience was effortless. In addition to providing route information, ShuttleGirl evolved to provide a number of services, including real-time updates that could be received on cellular handheld devices. Not unlike Google founders Larry Page and Sergey Brin, Delvecchio and Karamchandari coupled their combined ingenuity with computer savvy, developed several new technologies, tied them to a powerful algorithm, and hid it behind a spare, user-friendly interface. They chose for their logo a tantalizing enigma: the silhouette of an undisclosed celebrity pop star, which would later be replaced by a partial photograph of a mystery co-ed that in turn created a campuswide obsession over ShuttleGirl's true identity. Their platform was so enormously appealing that the Massachusetts Bay Transit Authority (MBTA), Boston's mass transportation agency, adopted it for its entire commuter rail schedule. Soon, six other cities and a number of other colleges would purchase the system, and the duo formed a company called Second Kiss Wireless to market the ShuttleGirl platform more widely. In a June 2001 interview with campus newspaper the Harvard Crimson, Delvecchio said of ShuttleGirl's various capabilities: "One algorithm does it all. We think ShuttleGirl is an incredibly elegant solution." At Davidson College in Charlotte, North Carolina, a course on short prose fiction taught by award-winning writer Randy Nelson begins with a peculiar assignment: using only a box of 250 toothpicks, three feet of string, and a 2.5-ounce tube of glue, each student must build a bridge at least two toothpicks high and strong enough to hold a brick. The goal, Nelson says, is for each student to come up with "an elegant solution--one that is simple, beautiful, strong and stunningly original," and one that uses "every inch of string, every drop of glue and clicks into place with the 250th toothpick." Nelson's lesson is directly applicable to good fiction, he says, which in his view must also be beautiful, original, sturdy, not require any more words than necessary, and click into place with the last word. For six months in 1983, a lengthy political struggle involving the White House, Congress, and civil rights groups seemed likely to destroy the United States Commission on Civil Rights. The conflict was sparked by then president Ronald Reagan's precipitous nomination of three new commissioners. The act turned pending legislation intended to extend the life of the commission into a political minefield, as civil rights groups and Congress saw the independent, bipartisan nature of the commission threatened by executive interference. Both the House of Representatives and the Senate introduced resolutions calling for the commission to be reconstituted as an arm of Congress, rather than as a part of the executive branch. But Senate leadership was unsettled by the idea of a new commission in the legislative branch and balked at calling for a floor vote. Meanwhile, the House voted to deny the commission funding if it retained executive branch status. As the deadline for the expiration date of the commission rapidly approached, negotiations intensified and ran around the clock. At the last possible minute, the Senate proposed a compromise: a new hybrid agency that would have a six-year term and eight commissioners--half Democrat and half Republican, four appointed by the president, two by the House, two by the Senate--who were to run staggered terms, with removal only for cause. In a single stroke, the offer effectively preserved the interests of all involved. Declared the New York Times: "It's an elegant solution." The choice to use the phrase "elegant solution" implies that there is something distinctive about how each of these multifarious problems was resolved. What Delvecchio, Nelson, and the New York Times seem to share is the understanding that an elegant solution is in a class all its own, that what sets it apart is the unique combination of surprising power and uncommon simplicity, and that elegance entails achieving far more with much less when faced with a complex problem. Elegance is indeed a widely sought-after quality, and yet it takes many forms. Scientists, mathematicians, and engineers search for theories that explain highly complex phenomena in stunningly simple ways. Artists and designers use white, or "negative," space to convey visual power. Musicians and composers use pauses in the music--silence--to create dramatic tension. Athletes and dancers search for maximum effect with minimal effort. In Japan, architects and martial artists pursue shibumi, a word appropriately without definition but meaning, very loosely translated, "effortless effectiveness." Physicians draw on the Occam's razor principle in an effort to find a single diagnosis to explain the entirety of a patient's symptoms, shaving the analysis down to the simplest explanation. Filmmakers, novelists, and songwriters strive to tell stories that seem simple but that foster multiple meanings yet achieve universal resonance. But no matter how determinedly we pursue it, elegance is an elusive target. As a principle it resists reduction--it's difficult to decode. Perhaps that helps explain why it's rare. Experiencing elegance is nearly always profound: it gives us pause, often evoking an "Of course!"--usually accompanied by a mild slap to the forehead. It can change our view of things, often forever. Webster's New World Dictionary, in an updated definition, describes elegance as "marked by concision, incisiveness and ingenuity; cleverly apt and simple, as an elegant solution to a problem." But is there a practical way to explain better what it is and isn't, what it means, and how it works? a. When you enter the office of retired professor Donald Knuth in the Stanford University Computer Sciences Department, several things strike you immediately as somewhat odd: he prefers pad

and pencil over a keyboard, he works standing up, and he doesn't use e_mail. It's peculiar because Donald Knuth is none other than the father of computer science, revered by those in the know for his contributions to the field. Knuth's love affair with computers and programming began over a half century ago, in 1957, and as mainframe computers were just emerging, "There was something special about the IBM 650," Knuth says in a memoir, "something that has provided the inspiration for much of my life's work." By the following year Knuth had written instructional code for the IBM 650 and drafted a user manual. CBS Evening News, which featured one of Knuth's first programs--it was designed to compute basketball game statistics--described it as a "magic formula." Author of *The Art of Computer Programming*, a multivolume tome that many consider to be the masterwork of the field, Knuth introduced, as one University of California professor put it, "elegance into programming," believing that computer programmers should view lines of computer code more as literature, so that people (and not simply other computers) could easily read and understand them. According to Knuth, elegant software requires programming in such a transparent way that not only can other programmers learn from it, but they can also enjoy reading it in front of the fire, "like good prose." One of Knuth's favorite lecture topics is "solving puzzling problems." He knows he's ready to solve a problem elegantly when he can hold the answer in his head without having to write it down. Even with all of the advancement in software coding in the last fifty years, his programs remain the de facto standard for scientific publishing today. What is Donald Knuth's definition of elegance? "Symmetrical, pleasingly memorable, spare--with the ease and immortal ring of an $E=mc^2$." Those criteria are a bit cryptic, which perhaps isn't so surprising, given that Knuth's world revolves around a code, something that is by definition mysterious. So what exactly does he mean? In 1782 a Swiss mathematician by the name of Leonhard Euler wrote about a numerical array called Latin squares. Latin squares were symmetrical grids with an equal number (n) of rows and columns. The only rule was that every number from 1 to n had to appear exactly once in each row and column. In other words, if there were seven rows and seven columns, the numbers 1 through 7 would appear exactly once in each row and column. Fast-forward nearly two hundred years to 1979, when *Dell* puzzle magazines published a numerical brainteaser they called *Number Place*. Indianapolis architect Howard Garnes had, in his spare time, tinkered with Euler's Latin squares to design a nine-by-nine Latin square with a new twist. He added nine three-by-three subgrids. Each could contain exactly one occurrence of all the numbers 1 through 9, in addition to the rows and columns requirement. The goal, of course, was to fill in the matrix completely. A few clues were given in the form of numbers already in place in one of the eighty-one boxes. Shortly thereafter, in 1984, the Japanese publisher Nikoli introduced the game in its newspaper, adding yet a further twist. No more than thirty clues or "givens" were permitted, and they had to be distributed with exact mirror symmetry. Nikoli renamed the game *Sudoku*. It became a nationwide obsession in Japan within a few years. In 2004, retired Hong Kong judge and puzzle fanatic Wayne Gould made a trip to London in a successful effort to persuade the *Times* editors to print *Sudoku* puzzles in their paper. The *Times* introduced *Sudoku* as a daily feature on November 12, 2004. The craze spread to Australia and New Zealand, where newspapers like the *Daily Telegraph* and the *Daily Mail* began publishing *Sudoku* the following year. In July 2005, British satellite television channel Sky One launched the world's largest *Sudoku* puzzle, a 275-foot construction, by carving it in the side of a hill near the city of Bristol. By the end of 2005, the World Puzzle Federation had declared *Sudoku* the number-one logic puzzle in the world. Today there are online versions, *Sudoku* radio and television shows and games, *Sudoku* clubs, strategy books, videos, card games, and competitions. In 2006, Italy hosted the first World *Sudoku* Championship, with teams from around the world participating. Being the champion in one's own country is tough enough, but the competition in these international games is even more fierce. Will Shortz, the famed crossword puzzle editor for the *New York Times* and the only person in the world with a degree in enigmatology (the study of codes and puzzles), describes himself as a *Sudoku* "addict." By the end of 2006, *Sudoku* was a worldwide craze, with millions playing it daily. So what is the connection between *Sudoku* and Knuth? I would argue that it is the elements of elegance. In keeping with Knuth's criteria, *Sudoku* can help us to arrive at a concise working definition of the concept. First, in keeping with Knuth's first dimension, *Sudoku* is symmetrical, with its squares inside of squares and mirrored distribution of clues. Second, it is seductive--to the point of being irresistible and craze-worthy--another way to couch Knuth's "pleasingly memorable." Will Shortz confirms that his *Sudoku* addiction stems from the seductive appeal of the empty squares to be filled in. It is intentionally spare, in keeping with Knuth's third dimension, through a process best described as subtractive. The *Sudoku* puzzle designer crafts a complete solution and then symmetrically subtracts filled-in squares to arrive at the starting grid, which is predominantly empty. Finally, and as a result of these first three, the game is sustainable in terms of both the infinite number of games that can be constructed, as well as players' interest in the game. In other words, there is an "ease and immortal ring" to it. In fact, *Sudoku* could not be easier to learn: you do not even need to know how to count, its one rule can be explained in a single sentence, it takes but a minute to grasp, and it is universal in nature (unlike crossword puzzles, which are knowledge-based as well as language-specific) because the numbers are just symbols. And yet, the underlying complexity behind the logic needed to solve a *Sudoku* puzzle can be incredibly challenging. Symmetry. Seduction. Subtraction. Sustainability. These are the key elements of elegance--the laws that can help us harness the power of the missing piece. Symmetry helps us solve problems of structure, order, and aesthetics. We are natural-born symmetry seekers. Most of nature, with its infinitely repeating patterns, is symmetrical. It is present in nearly every living thing, and we generally equate

symmetry with beauty and balance. In fact, a number of studies have found that most people find symmetrical faces more attractive. But symmetry isn't limited to biology. Symmetry is where mathematics, nature, science, and art come together. We are adept at noticing a lack of symmetry, which is why we can exploit it to our advantage--when someone experiences a degree of asymmetry, they naturally want to "fill in" the obviously missing piece. It's the nature of symmetry that enables us to find solutions given only partial information. When symmetry comes into play, what appears to be missing isn't. It's at once absent, and yet present. When, for example, Sopranos viewers were robbed of a standard story structure--a beginning, middle, and end--they were initially distraught. But when reassured by the story creator himself that the missing piece was "all there," they went in search of an ending--the "truth"--to restore their perceived loss of symmetry. Symmetry allowed you to complete the letter E earlier, and the role of symmetry in Sudoku is clear. Seduction addresses the problem of creative engagement. It captivates any attention and activates any imagination. The power of suggestion is often stronger than that of full disclosure. Leaving something to the imagination, open to interpretation, creates an irresistible aura of mystery, and we are compelled to find answers. The seduction is in what we don't know. What we don't know far outweighs what we do, and we are naturally curious; we are easily drawn to the unknown, precisely because it is unknown. What isn't there drives us to resolve our curiosity. From the Hardcover edition.