

Generative Design: Visualize, Program, And Create With Processing



Synopsis

Generative design is a revolutionary new method of creating artwork, models, and animations from sets of rules, or algorithms. By using accessible programming languages such as Processing, artists and designers are producing extravagant, crystalline structures that can form the basis of anything from patterned textiles and typography to lighting, scientific diagrams, sculptures, films, and even fantastical buildings. Opening with a gallery of thirty-five illustrated case studies, Generative Design takes users through specific, practical instructions on how to create their own visual experiments by combining simple-to-use programming codes with basic design principles. A detailed handbook of advanced strategies provides visual artists with all the tools to achieve proficiency. Both a how-to manual and a showcase for recent work in this exciting new field, Generative Design is the definitive study and reference book that designers have been waiting for.

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Customer Reviews

"Beautifully illustrated... A fine introduction to generative design, filled with impressive examples and thankfully free of mind-numbing jargon... This book, equal parts art and textbook, is a valuable tool for both learning what exists and triggering new ideas." -- Steven Heller, The New York Times
"Fortunately, this insiders' how-to manual--by Hartmut Bohnacker, Benedikt Groß, and Julia Laub--contains loads of images and project profiles that together form a snapshot of the emerging field, which, in layman's terms, uses computer software and algorithms to generate visually exciting forms based on wildly complex concepts. The examples are rich and varied, ranging from a series that visualizes the air quality in various cities through virtual plant growth to a

company logo that evolves through a kind of genetic recombination." --- Fast Company

Hartmut Bohnacker is an independent designer in Stuttgart specializing in interface and interaction development. He is a professor of interaction design at The University of Design Schwäbisch Gmünd. Benedikt Groth is an MA student in Design Interactions at the Royal College of Art in London. Prior to that, he was an IX and UX Designer at Intuity Media Lab in Stuttgart. Julia Laub is an independent graphic designer specializing in book design, corporate design and generative design. In 2010 she established the design agency onformative (studio for generative design) in Berlin with Cedric Kiefer. She is an assistant professor for generative design at The University of Applied Studies Mainz. Claudius Lazzeroni, editor, is a professor of interface design at the Folkwang University of the Arts in Essen.

Purchased this book after the German edition received rave reviews, now in an English translation. Those familiar with the Processing programming language probably need no introduction to this book, which is why there probably aren't any reviews (I dare say it doesn't need any). Still, I thought I would share an opinion. This really is a beautiful book, a chest of techniques, methods and examples for working through the Processing language in the context of generative design. It's broken into two sections, with the first quarter of the book devoted to glossy full color 'plates' (if you like), surveying artists working in the generative design field. The rest of the book is dedicated to the Processing language, broken into two sections - basic examples, and then more complex methods. The textbook pages have a non-glossy paper feel, which in and of themselves are a lovely texture and weight. In particular the binding of the book is something of an achievement - each page seems to fall gently over the next, leaving an open book that never needs much creasing or pressing to get the spine to lay flat. It is a heavy book, so probably best set next to a computer and a cup of coffee as you wade through the many examples. It has to be said that the examples here are also (expectedly) beautiful, and unlike other programming books, they don't resort to a uninspiring aesthetic or to ugly sketches that no one wants to code. The sketches in this book are simply gorgeous and the kind of thing that probably made you want to get started with Processing in the first place. The layout is also fantastic, with clear pointers to what each part of the code means and does, not to mention great full color representations of the sketches variations. It's very hard for me not to recommend this book to any Processing programmer, or to any beginning Processing user, but I would have to say it might not be the best place to start. Having said that if you're interested in Processing or Generative Design you should go out and buy this book right now, it will

leave you inspired for months and maybe years. If you're just starting out then obviously the Processing website, examples and reference are a great starting point, as well as the Processing book by Reas & Fry. Following on from there Generative Design is like a more advanced text to the Reas and Fry version. Coupled with the examples provided on the companion website (freely downloadable), and the fact they upgraded the code in this English text to Processing 2.0 really make this text a current and useful tool. And while I do love the artist pages at the beginning of the book I can't help but feel it wouldn't have been a loss if they were omitted. That's just a personal opinion (and my reason for 4 stars), as the focus for me here and the real attraction to the book is the 'textbook' part. If anything it would have made it more 'backpackable' - enabling it to be taken on the go with less strain on the shoulders. I've yet to scour the book from end to end so this is more of a general vibe of what it's like in person. An absolutely fabulous text and a book worth keeping for life, that will certainly sit as a crucial text in the processing lineage along with DBN, Creative Code and the Processing Programming Handbook.

I'm only 1/2 way through this book. I bought it (after hesitating due to the textbook high pricing) because it was highly recommended by students and instructors alike in a Intro to Computational Arts course I took recently online (via SUNY). It is a beautiful book and so well organized. The only knock is I wish in some cases it would give fuller code examples in some of the more involved sketches. I find by typing the code snippets as it is being broken down and explained is a very useful way to 'experience' and learn to code. I've been working with Processing for a long time and it is one of the best for both explaining the use of the Processing language and framing it within context of Graphic Arts and design principles. Another example and perhaps a bit more accessible to people new to coding is Matt Perason's Generative Art: a practical guide using Processing. This book Generative Design: Visualize, Program and Create with Processing has been a great 'next' step (more advanced) text and reference. It is organized by some basic design concepts (the use of color, shape, agents (interaction) and also has about 1/2 of the text devoted to Complex Methods (exploring randomness, noise, attractors, oscillation, etc). In the end this is a book I will go back to many many times and has been surprisingly well worth the price.

This is definitely one of my favorite books on yes, Processing - but also simply a beautifully designed book in its own right. It's even worthwhile simply as a collection of inspiring generative art, even if you have no interest in learning the code from a practical level. If you do however, you're in for even more of a treat, because the code examples are laid out beautifully. As a designer, it's

amazingly refreshing to see educational material treated in a way that is both easy to understand, and aesthetically pleasing. The visual examples are diverse and inspiring, and the code is explained in a way that is relatively straightforward to understand. It's helpful if you have a fundamental understanding of Processing (or coding in general), but because it's broken apart so well, you don't need to understand everything to be able to grasp the core functionality. There are other books that are better for teaching basic concepts in a methodical way (Daniel Shiffman does a great job with Learning Processing and then The Nature of Code), but this book is great to add to the collection for its variety of inspiring examples. Most of the works have walkthroughs of the code side by side, and the actual source code is available to download as well. If you're interested in Processing or generative art, I can't recommend this book enough.

this book has a lot of powerful concepts and interesting experiments even experienced programmers can learn a lot from. to get the most from it you'll have to use your own curiosity and self-motivation, doesn't really offer step-by-step instructions so much as it presents key concepts in brief and leaves it up to the reader to dig through the source files (downloadable free from the book's website) and experiment with parameters for different results. excellent reference work for anyone using processing to generatively produce motion graphics, data visualizations, installation art, etc. the most advanced processing book out there to stimulate your creativity.

A fantastic book on generative design and art. A rich documentary ideal for the beginner because it shows, then explains the code using descriptions in side boxes. This way you can experiment with the parameters or be inspired and take the idea further in your own direction. The book's layout and design are beautiful and easy to read. The paper and print are of high quality. This is a large book and is a great supplement to a course in the Processing programming language. Well worth the money.

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