

Ben Fry: Content/Research

An interdisciplinary man

Created the programming language Processing which is meant to make coding more accessible to beginners and facilitate work with graphics
"an open source programming language and environment for people who want to program images, animation, and interactions. It is used by students, artists, designers, researchers, and hobbyists for learning, prototyping, and production."

Thoughts: there's tons of data in our world now, so much that it's hard to understand
Think massive excel spreadsheets and lists of information
It's the way that we can learn about and improve ourselves and make decisions
But it's hard to wade through
But this guy tries to make it easier
More than that though, he tries to make it beautiful
Because patterns are beautiful, and what we really are looking for when we look at data is patterns
Significance of how data is presented to how it is interpreted: financial data, for instance
Also political data: see Health care flow chart; deliberately confusing
Wrote the book Visualizing Data

Importance of data and information design:
http://news.cnet.com/8301-30685_3-20031295-264.html

Incorporating the idea of people's sense of number from How People Learn Math: visualization is very important because it is hard for people to conceive of large values

Notes from His Talk at UX Week 2010

<http://vimeo.com/15006552>
Began as a User Interface Designer at Netscape
Then went to MIT Media lab

Infographics vs. visualization:
Infographics, manageable amount of data
Data visualization: more data
Good job security-- "there will never be less data"

See next page for transcript with highlights

Another brief interview:
<http://ben.fry.usesthis.com/>

A biography from Columbia's Grad School

The amount of information our society generates is difficult to quantify, but one estimation holds that we now create more data each year than was produced in all prior human history. Generating actionable knowledge from this information is a critical design challenge with substantial economic, political and intellectual consequence. Data Visualization is a term that is increasing being used to describe strategies for interpreting and visualizing the mass amount of data we collect about our world. Ben Fry believes a collaborative multi-field approach is necessary to solve current data visualization and interpretation problems. He will discuss his approach as well as attempt to define this emerging field.
Fry received his doctoral degree from the Aesthetics + Computation Group at the MIT Media Laboratory, where his research focused on combining fields such as computer science, statistics, graphic design, and data visualization as a means for understanding information. During the 2006-2007 school year, Ben was the Nierenberg Chair of Design for the Carnegie Mellon School of Design. Ben went on to become director of Seed Visualization and its Phylotaxis Lab, a design laboratory in Cambridge, Massachusetts focused on understanding complex data. Ben now runs his own design firm focusing on Data Visualization.

Pasted from <<http://www.arch.columbia.edu/event/osapp-evert/defining-data-visualization-ben-fry>>

About the programming language he created: Processing:
<http://processing.org/about/>

Tens of thousands of companies, artists, designers, architects, and researchers use Processing to create an incredibly diverse range of projects.

- Design firms such as Motion Theory provide motion graphics created with Processing for the TV commercials of companies like Nike, Budweiser, and Hewlett-Packard.
- Bands such as R.E.M., Radiohead, and Modest Mouse have featured animation created with Processing in their music videos.
- Publications such as the Journal Nature, the New York Times, Seed, and Communications of the ACM have commissioned information graphics created with Processing.
- The artist group HeHe used Processing to produce their award-winning Nuage Vert installation, a large-scale public visualization of pollution levels in Helsinki.
- The University of Washington's Applied Physics Lab used Processing to create a visualization of a coastal marine ecosystem as a part of the NSF RISE project.
- The Armstrong Institute for Interactive Media Studies at Miami University uses Processing to build visualization tools and analyze text for digital humanities research.

Pasted from <<http://processing.org/about/>>

Biography from 2005:
http://www.infovis-wiki.net/index.php?title=Fry,_Benjamin

Photo of him and biography from CMU
http://www.design.cmu.edu/show_news.php?id=69&m=2006

<http://www.tierra-innovation.com/blog/2009/05/11/processing-merging-code-and-design/>

Ben fry in seed magazine
http://revminds.seedmagazine.com/revminds/member/ben_fry/

Good and thorough interview: <http://www.katiepeek.com/dataminecanary/2010/03/a-qa-with-ben-fry-data-visualist-extraordinaire.html>
I studied graphic design and computer science, but separately. I was interested in both since I was young, then during undergrad, majored in design at Carnegie Mellon, and minored in computer science.

Pasted from <<http://www.katiepeek.com/dataminecanary/2010/03/a-qa-with-ben-fry-data-visualist-extraordinaire.html>>

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uc010nqx.1	chr1	+	11873	14409	12189	13639	3	11873,12594,13402,	12227,12721,14409,	B72GX9	uc010nqx.1
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uc001aa1.1	chr1	+	321083	321114	321083	321083	1	321083,321114,	uc001aa1.1		
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A project that uses processing to visualize the dramatic structure of shakespeare (the digital humanities)

UNDERSTANDING SHAKESPEARE

Towards a Visual Form for Dramatic Texts and Language

[The Approaches](#) / [The Book](#) / [The Process](#) / [The Prints](#) / [About](#)

[Visualizing the Dramatic Structure](#) / [Shakespeare Summarized](#) / [Me, You and Them](#) / [Enter Exit](#) / [Shakespeare Googled](#)

The goal of this approach was to provide an overview of the entire play by showing its text through a collection of the most frequently used words for each character. A scene is represented by a block of text and scaled relatively according to its number of words. Characters are ordered by appearance from left to right throughout the play. The major character's speeches are highlighted to illustrate their amounts of spoken words as compared to the rest of the play.



The Comedy of Errors
1440 views on flickr



The Taming of the Shrew
597 views on flickr



The Two Gentlemen of Verona
589 views on flickr



Love's Labour's Lost
303 views on flickr

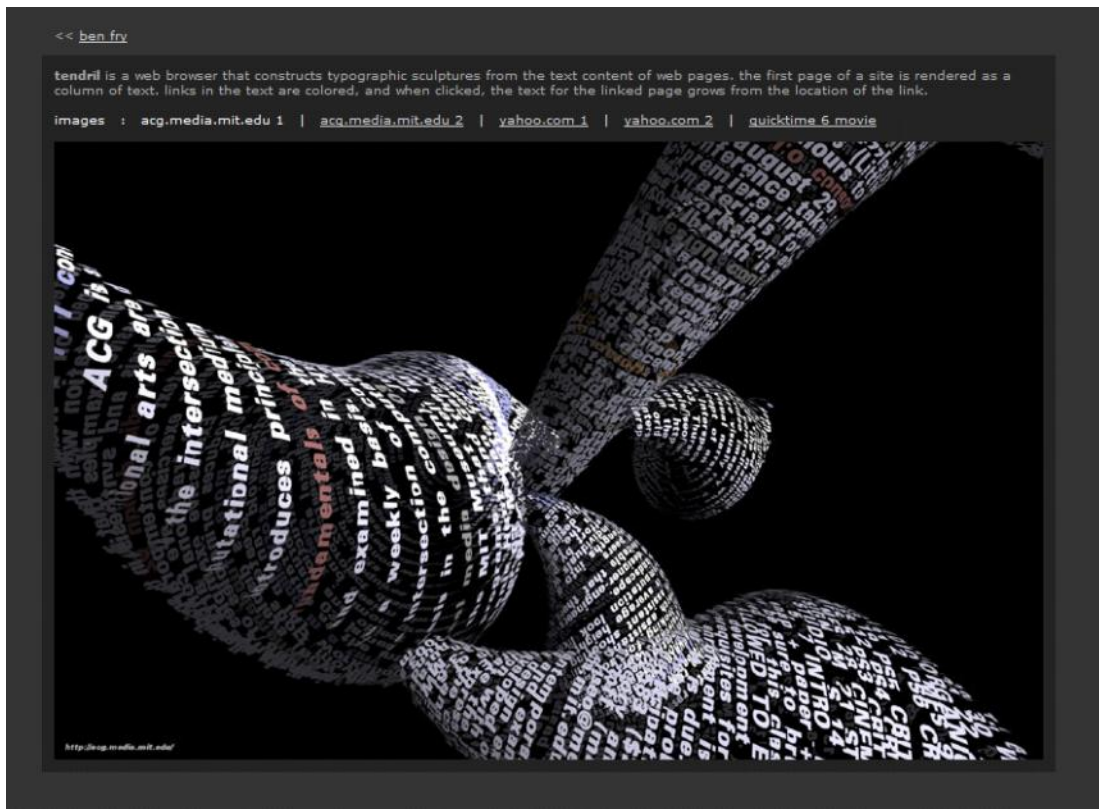


A Midsummer Night's Dream
1317 views on flickr

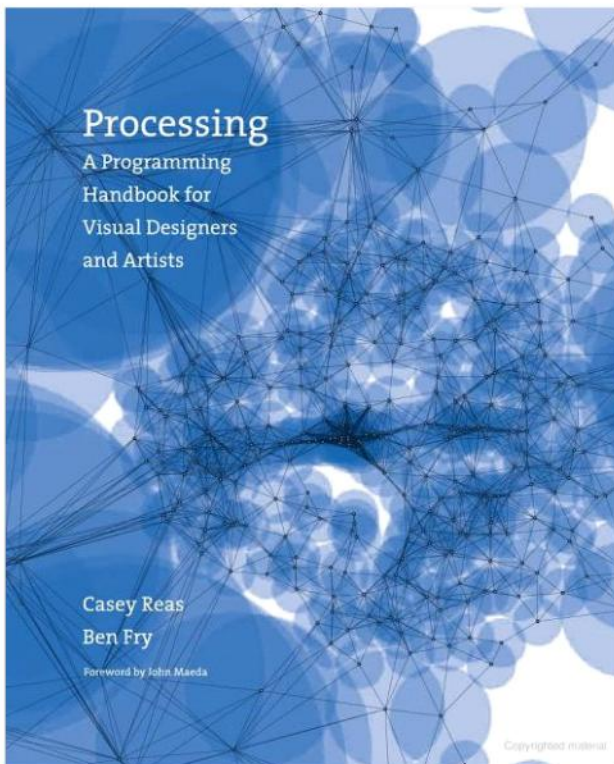


The Merchant of Venice
390 views on flickr

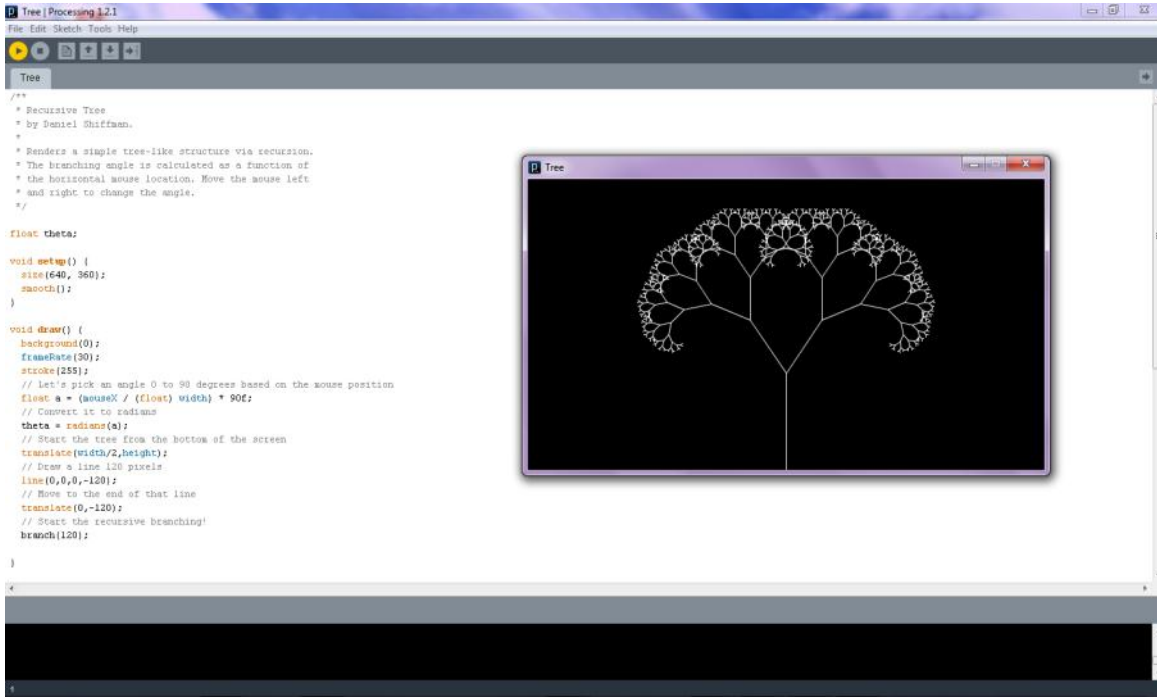
Screen clipping taken: 2/21/2011, 3:03 PM <http://www.understanding-shakespeare.com/>



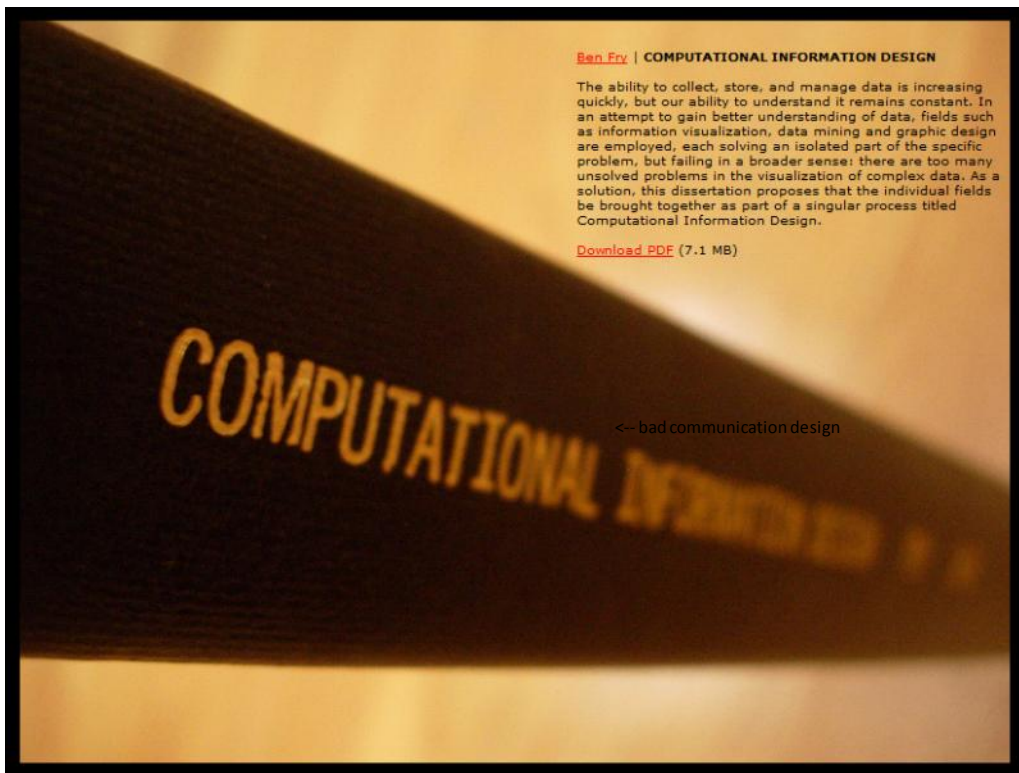
Screen clipping taken: 2/20/2011, 2:28 AM <http://benfry.com/tendrils/>



Screen clipping taken: 2/21/2011, 3:07 PM http://books.google.com/books?id=tqW75bfkxiC&printsec=frontcover&dq=ben+fry+processing&source=bl&ots=Sk1ZSEOFXd&sig=rZfymcAE8DdWm41Q4BVXOW9Pndg&hl=en&ei=rtiTYHFOokr8AaOkcWDA&sa=X&oi=book_result&ct=result&resnum=9&sqi=2&ved=0CGUQ6AEwCA#v=onepage&q&f=true



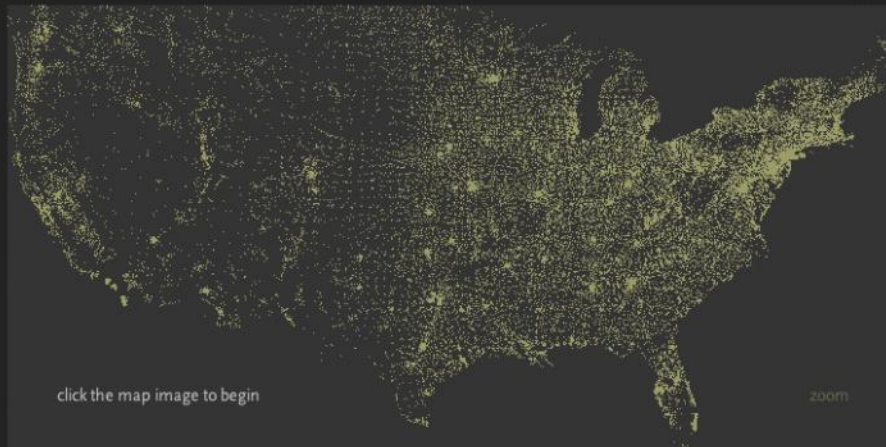
Processing in action



Screen clipping taken: 2/21/2011, 2:29 PM

Image and description of his PHD thesis: <http://benfry.com/phd/>

<< [ben fry](#)



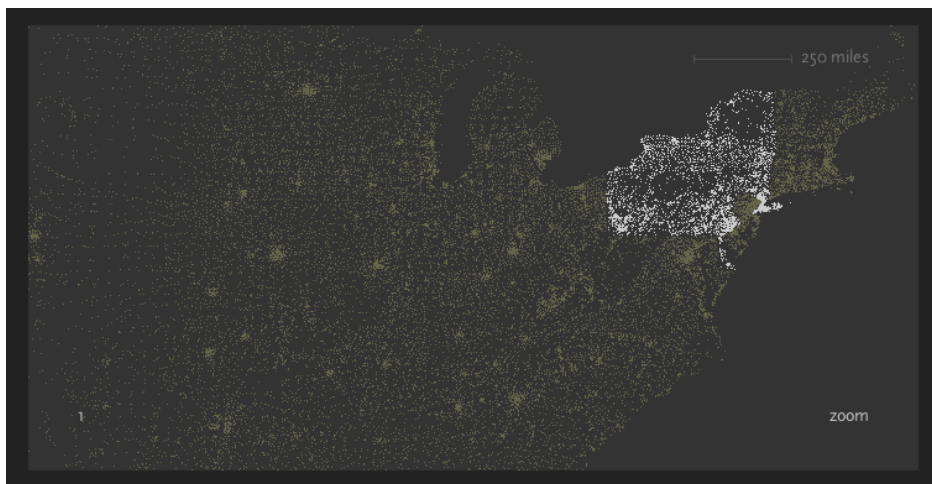
Hit the letter z, or click the word zoom to enable or disable zooming. Hold down shift while typing a number to replace the previous number (U.S. keyboards only).

zipcode

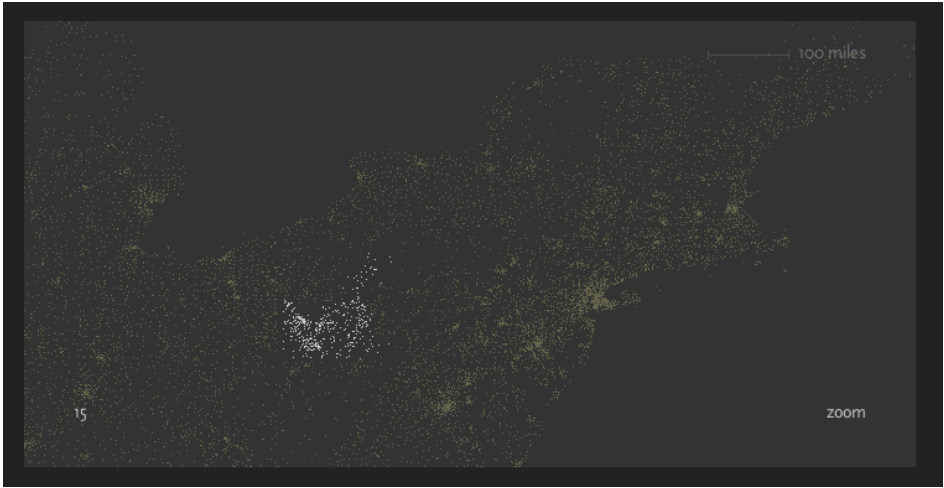
This project began a very short sketch (a few hours) that I created because I was curious about how the numbering works for postal codes in the states.

A detailed description of this project (and source code for an updated version) can be found in my book [Visualizing Data](#).

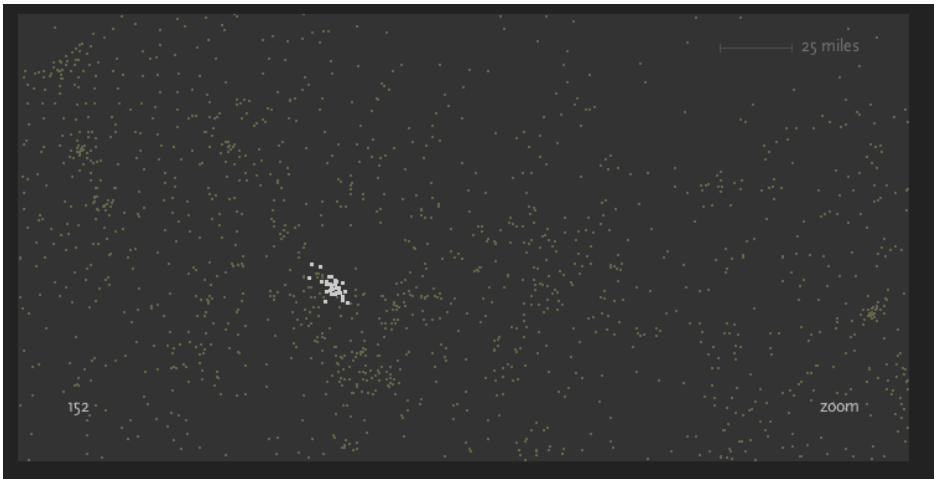
Last updated 28 September 2004... This version adds several features over the original, including zoom, some new colors (thanks to [Eugene Kug](#)), and a better zip code database (because of all the people who emailed and were sad that they couldn't find themselves).



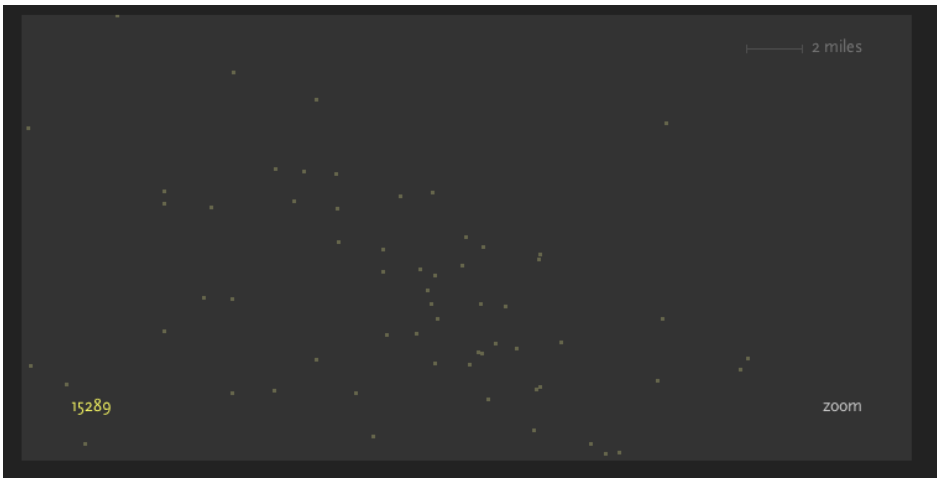
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Screen clipping taken: 2/19/2011, 11:48 PM



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Screen clipping taken: 2/19/2011, 11:49 PM

<http://benfry.com/zipdecode/>

anemone

Using the process of organic information design to visualize the changing structure of a web site, juxtaposed with usage information

An organism that monitors web traffic. Click the link below to watch users as they peruse my former group's web site.

Run the [anemone applet](#) »

View a [movie](#) of anemone »

Read more [about](#) anemone. »

A discussion of how this project was built, along with its source code so that you can adapt it to your own site can be found in my book [Visualizing Data](#).

The program is an example of *organic information design*, which is the process of creating software visualizations that demonstrate and express features of large, dynamic data sources. The conceptual portion is described in depth in my [master's thesis](#).

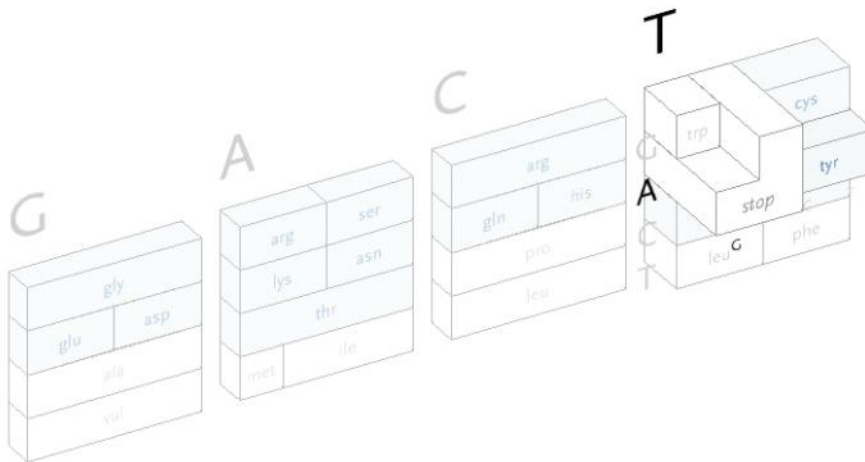
< [ben fry](#)

Screen clipping taken: 2/19/2011, 11:50 PM <http://benfry.com/anemone/>



Screen clipping taken: 2/19/2011, 11:55 PM <http://benfry.com/anemone/about/>

basic redesign with coloring interactive type letters a, c, g, and t (or delete to go back one letter)



The Genetic Code by Ben Fry | Built with Processing

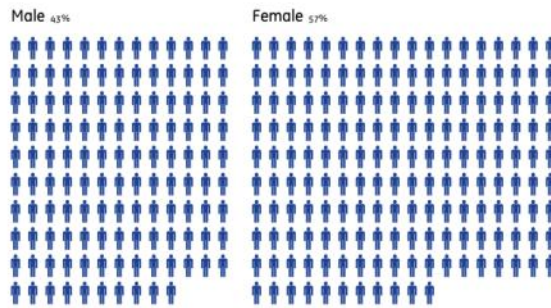


Exit

Taking a New Look at Health

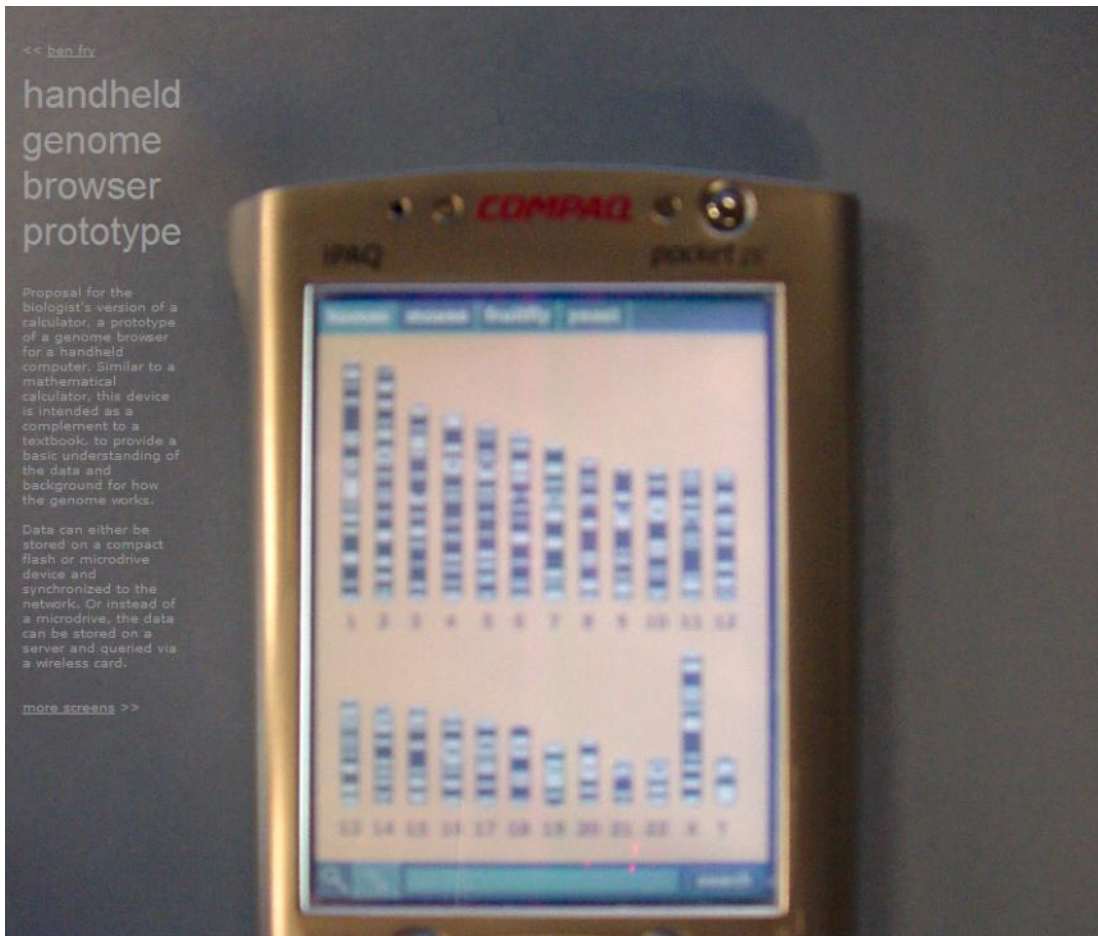
What are the major health issues facing Americans today? What are some of the most common conditions, and how are they related to one another? What can we do to improve our health?

	Demographics		Risk Factors		Diseases & Conditions			
Compare:	<input checked="" type="checkbox"/> Gender	<input type="checkbox"/> Age	<input type="checkbox"/> Body Mass Index	<input type="checkbox"/> Smoking	<input type="checkbox"/> Diabetes	<input type="checkbox"/> Hypertension	<input type="checkbox"/> Heart Disease	<input type="checkbox"/> Stroke
With:	<input type="checkbox"/> Gender	<input type="checkbox"/> Age	<input type="checkbox"/> Body Mass Index	<input type="checkbox"/> Smoking	<input type="checkbox"/> Diabetes	<input type="checkbox"/> Hypertension	<input type="checkbox"/> Heart Disease	<input type="checkbox"/> Stroke



Women visit doctors two to four times more often than men.
today.msnbc.com

About this data
The information here is based on a random sample of 100,000 patient records from GE's proprietary database, and represents some of the conditions that commonly affect Americans today. The numbers and percentages aren't statistically significant; they're meant to represent general trends. Looking at the data in new ways like this can help us understand health and gain new insights about how to take better care of ourselves and the healthcare system.



<http://benfry.com/browser2/>
 Screen clipping taken: 2/20/2011, 2:25 AM

Aligning Humans and Mammals

Ben Fry

Sequences of human DNA aligned with about a dozen other mammals, created as an illustration for *Seed Magazine*. The data is from the **Mammalian Genome Project** at the **Broad Institute**. This is real alignment data, based on a more "functional" tool that browses this data. The upper image is the final, and the lower image is an alternate.

In each block, the top (white) row is human DNA, additional rows are ordered roughly in their "evolutionary distance" from humans. First row after human is chimp, then rhesus macaque (rhesus monkey), elephant, dog, armadillo, cavia (basically a guinea pig), cow, and so on, down to monotelphis (opossum). Letters are colored when they differ from human, with Ts and As in red, Cs and Gs in blue.

Screen clipping taken: 2/20/2011, 2:25 AM

<http://benfry.com/infoseed/>