

III. CHOICE



You May Always Choose None of the Above

In the digital realm, everything is made into a choice. The medium is biased toward the discrete. This often leaves out things we have not chosen to notice or record, and forces choices when none need to be made.

The difference between an analog record and a digital CD is really quite simple. The record is the artifact of a real event

that happened in a particular time and place. A musician plays an instrument while, nearby, a needle cuts a groove in a wax disk (or disturbs the electrons on a magnetic tape). The sound vibrates the needle, leaving a physical record of the noise that can be turned into a mold and copied. When someone else passes a needle over the jagged groove on one of the copies, the original sound emerges. No one has to really know anything about the sound for this to work. It's just a physical event—an impression left in matter.

A CD, on the other hand, is not a physical artifact but a symbolic representation. It's more like text than it is like sound. A computer is programmed to measure various parameters of the sound coming from a musician's instrument. The computer assigns numerical values, many times a second, to the sound in an effort to represent it mathematically. Once the numerical—or “digital”—equivalent of the recording is quantified, it can be transferred to another computer, which then synthesizes the music from scratch based on those numbers.

The analog recording is a physical impression, while the digital recording is a series of choices. The former is as smooth and continuous as real time; the latter is a series of numerical snapshots. The record has as much fidelity as the materials will allow. The CD has as much fidelity as the people programming its creation thought to allow. The numbers used to represent the song—the digital file—is perfect, at least on its own terms. It can be copied exactly, and infinitely.

In the digital recording, however, only the dimensions of the sound that can be measured and represented in numbers are taken into account. Any dimensions that the recording engineers haven't taken into consideration are lost. They are simply not measured, written down, stored, and reproduced. It's not as if they can be rediscovered later on some upgraded playback device. They are gone.

Given how convincingly real a digital recording can seem—especially in comparison with a scratchy record—this loss may seem trivial. After all, if we can't hear it, how important could it be? Most of us have decided it's not so important at all. But early tests of analog recordings compared to digital ones revealed that music played back on a CD format had much less of a positive impact on depressed patients than the same recording played back on a record. Other tests showed that digitally recorded sound moved the air in a room significantly differently than analog recordings played through the same speakers. The bodies in that room would, presumably, also experience that difference—even if we humans can't immediately put a name or metric on exactly what that difference is.

So digital audio engineers go back and increase the sampling rates, look to measure things about the sound they didn't measure before, and try again. If the sampling rate and frequency range are “beyond the capability of the human ear” then it is presumed the problem is solved. But the problem is

not that the digital recording is not good enough—it is that it's a fundamentally different phenomenon from the analog one. The analog really just happens—the same way the hands of a clock move slowly around the dial, passing over the digits in one smooth motion. The digital recording is more like a digital clock, making absolute and discrete choices about when those seconds are changing from one to the next.

These choices—these artificially segmented decision points—appear very real to us. They are so commanding, so absolute. Nothing in the real world is so very discrete, however. We can't even decide when life begins and ends, much less when a breath is complete or when the decay of a musical note's echo has truly ended—if it ever does. Every translation of a real thing to the symbolic realm of the digital requires that such decisions be made.

The digital realm is biased toward choice, because everything must be expressed in the terms of a discrete, yes-or-no, symbolic language. This, in turn, often forces choices on humans operating within the digital sphere. We must come to recognize the increased number of choices in our lives as largely a side effect of the digital; we always have the choice of making no choice at all.

All this real and illusory choice—all these unnecessary decision points—may indeed be a dream come true for marketers desperate to convince us that our every consumer preference matters. But it's not their fault. They are merely

exploiting digital technology's pre-existing bias for yes-or-no decisions.

After all, the very architecture of the digital is numbers; every file, picture, song, movie, program, and operating system is just a number. (Open a video or picture of a loved one in your text editor to see it, if you're interested.) And to the computer, that number is actually represented as a series of 1's and 0's. There's nothing in between that 1 and 0, since a computer or switch is either on or off. All the messy stuff in between yes and no, on and off, just doesn't travel down wires, through chips, or in packets. For something to be digital, it *has* to be expressed in digits.

It's in that translation from the blurry and nondescript real world of people and perceptions to the absolutely defined and numerical world of the digital where something might be lost. Exactly where in the spectrum between yellow and red is that strange shade of orange? 491 terahertz? A little more? 491.5? 0.6? Somewhere in between? How exact is enough? That's anyone's call, but what must be acknowledged first is that someone is, indeed, calling it. A choice is being made.

This isn't a bad thing; it's just how computers work. It's up to the cyborg philosophers of the future to tell us whether everything in reality is just information, reducible to long strings of just two digits. The issue here is that even if our world is made of pure information, we don't yet know enough about that data to record it. We don't know all the information,

or how to measure it. For now, our digital representations are compromises—symbol systems that record or transmit a great deal about what matters to us at any given moment. Better digital technology merely makes those choices at increasingly granular levels.

And while our computers are busy making discrete choices about the rather indiscrete and subtle world in which we live, many of us are busy, too—accommodating our computers by living and defining ourselves in their terms. We are making choices not because we want to, but because our programs demand them.

For instance, information online is stored in databases. A database is really just a list—but the computer or program has to be able to parse and use what's inside the list. This means someone—the programmer—must choose what questions will be asked and what options the user will have in responding: Man or Woman? Married or Single? Gay or Straight? It gets very easy to feel left out. Or old: 0–12, 13–19, 20–34, 35–48, or 49–75? The architecture of databases requires the programmer to pick the categories that matter, and at the granularity that matters to his or his employer's purpose.

As users, all we see is a world of choice—and isn't choice good? Here are one hundred possible looks for your mail browser, twenty possible dispositions each with twenty subsets for you to define yourself on a dating site, one hundred options for you to configure your car, life insurance,

or sneaker. When it doesn't feel overwhelming, it feels pretty empowering—at least for a while. More choice is a good thing, right? We equate it with more freedom, autonomy, self-determination, and democracy.

But it turns out more choice doesn't really do all this. We all want the freedom to choose, and the history of technology can easily be told as the story of how human beings gave themselves more choices: the choice to live in different climates, to spend our time doing things other than hunting for food, to read at night, and so on. Still, there's a value set attending all this choice, and the one choice we're not getting to make is whether or not to deal with all this choice.

Choice stops us, requiring that we make a decision in order to move on. Choice means selecting one option while letting all the others go. Imagine having to choose your college major before taking a single course. Each option passed over is an opportunity cost—both real and imagined. The more choices we make (or are forced to make) the more we believe our expectations will be met. But in actual experience, our pursuit of choice has the effect of making us less engaged, more obsessive, less free, and more controlled. And forced choice is no choice at all, whether for a hostage forced to choose which of her children can survive, or a social network user forced to tell the world whether she is married or single.

Digital technology's bias toward forced choices dovetails all too neatly with our roles as consumers, reinforcing this

notion of choice as somehow liberating while turning our interactive lives into fodder for consumer research. Websites and programs become laboratories where our keystrokes and mouse clicks are measured and compared, our every choice registered for its ability to predict and influence the next choice.

The more we accept each approximation as accurate, the more we reinforce these techniques from our machines and their programmers. Whether it's an online bookstore suggesting books based on our previous selections (and those of thousands of other consumers with similar choice histories), or a consumer research firm using kids' social networking behaviors to predict which ones will someday self-identify as gay (yes, they can do that now), choice is less about giving people what they want than getting them to take what the choice-giver has to sell.

Meanwhile, the more we learn to conform to the available choices, the more predictable and machinelike we become ourselves. We train ourselves to stay between the lines, like an image dragged onto a "snap-to" grid: It never stays quite where we put it, but jerks up and over to the closest available place on the predetermined map.

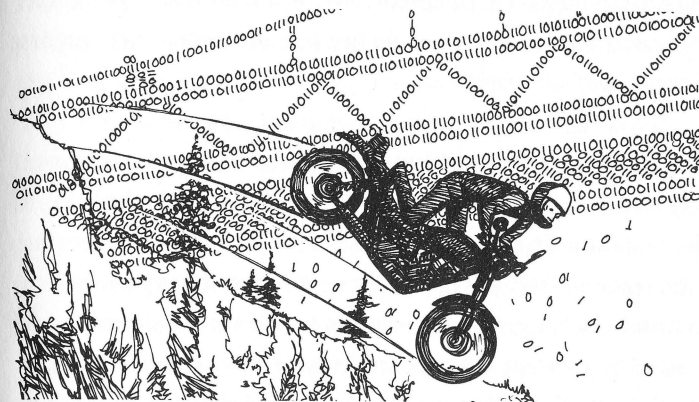
Likewise, through our series of choices about the news we read, feeds to which we subscribe, and websites we visit, we create a choice filter around ourselves. Friends and feeds we may have chosen arbitrarily or because we were forced

to in the past soon become the markers through which our programs and search engines choose what to show us next. Our choices narrow our world, as the infinity of possibility is lost in the translation to binary code.

One emerging alternative to forced, top-down choice in the digital realm is “tagging.” Instead of a picture, blog entry, or anything being entirely defined by its predetermined category, users who come upon it are free (but not obligated) to label it themselves with a tag. The more people who tag it a certain way, the more easily others looking for something with that tag will find it. While traditional databases are not biased toward categorizing things in an open-ended, bottom-up fashion, they are capable of operating this way. They needn’t be limited by the original choices programmed into them but can be programmed instead to expand their dimensions and categories based on the tags and preferences of the people using them. They can be made to conform to the way people think, instead of demanding we think like they do. It’s all in the programming, and in our awareness of how these technologies will be biased if we do not intervene consciously in their implementation.

Meanwhile, we are always free to withhold choice, resist categorization, or even go for something not on the list of available options. You may always choose none of the above. Withholding choice is not death. Quite on the contrary, it is one of the few things distinguishing life from its digital imitators.

IV. COMPLEXITY



You Are Never Completely Right

Although they allowed us to work with certain kinds of complexity in the first place, our digital tools often oversimplify nuanced problems. Biased against contradiction and compromise, our digital media tend to polarize us into opposing camps, incapable of recognizing shared values or dealing with paradox. On the net, we cast out for answers through simple search terms rather than diving into an inquiry and following extended lines of logic. We lose sight of the fact that our digital tools are modeling reality, not substituting for it, and mistake its oversimplified contours for