P A U L   G R A H A M

TABLETS

December 2010

I was thinking recently how inconvenient it was not to have a general term for iPhones, iPads, and the corresponding things running Android. The closest to a general term seems to be "mobile devices," but that (a) applies to any mobile phone, and (b) doesn't really capture what's distinctive about the iPad.

After a few seconds it struck me that what we'll end up calling these things is tablets. The only reason we even consider calling them "mobile devices" is that the iPhone preceded the iPad. If the iPad had come first, we wouldn't think of the iPhone as a phone; we'd think of it as a tablet small enough to hold up to your ear.

The iPhone isn't so much a phone as a replacement for a phone. That's an important distinction, because it's an early instance of what will become a common pattern. Many if not most of the special-purpose objects around us are going to be replaced by apps running on tablets.

This is already clear in cases like GPSes, music players, and cameras. But I think it will surprise people how many things are going to get replaced. We funded one startup that's replacing keys. The fact that you can change font sizes easily means the iPad effectively replaces reading glasses. I wouldn't be surprised if by playing some clever tricks with the accelerometer you could even replace the bathroom scale.

The advantages of doing things in software on a single device are so great that everything that can get turned into software will. So for the next couple years, a good recipe for startups will be to look around you for things that people haven't realized yet can be made unnecessary by a tablet app.

In 1938 Buckminster Fuller coined the term ephemeralization to describe the increasing tendency of physical machinery to be replaced by what we would now call software. The reason tablets are going to take over the world is not (just) that Steve Jobs and Co are industrial design wizards, but because they have this force behind them. The iPhone and the iPad have effectively drilled a hole that will allow ephemeralization to flow into a lot of new areas. No one who has studied the history of technology would want to underestimate the power of that force.

I worry about the power Apple could have with this force behind them. I don't want to see another era of client monoculture like the Microsoft one in the 80s and 90s. But if ephemeralization is one of the main forces driving the spread of tablets, that suggests a way to compete with Apple: be a better platform for it.

It has turned out to be a great thing that Apple tablets have accelerometers in them. Developers have used the accelerometer in ways Apple could never have imagined. That's the nature of platforms. The more versatile the tool, the less you can predict how people will use it. So tablet makers should be thinking: what else can we put in there? Not merely hardware, but software too. What else can we give developers access to? Give hackers an inch and they'll take you a mile.

Thanks to Sam Altman, Paul Buchheit, Jessica Livingston, and Robert Morris for reading drafts of this.