Rise of the Little Americas

"Zoo-boon-too." Not "ex-uh-bun-too." *Xubuntu*. A flavor of Ubuntu. Not so tasty as Android "Kitkat" or "Jellybean," but still technically a "flavor." When I first encountered it as a middle-schooler, my digital self underwent a culture shock. Where are the executable files? What is this "terminal" that I have to use? Where has the start menu gone? And I stuck to using Windows 7.

I have the right to the choice of operating system, the choice between Windows or Mac OS or Ubuntu. The inalienable right to liberty is one of America's defining principles. But how much of this freedom is the liberty of choice, and how much of it the liberty from cost?

Freedom from financial frets would eliminate immeasurable stress and greatly ease living. In the ideal world of infinite incomes and negligible inflation, the poor would maintain equal rights to the wealthy. People could own anything they wanted and live contentedly alongside one another. The world would be liberated from the needs of the poor, the sick, the wounded, and money could be fed into whatever field people wished.

But the world is in no position to achieve financial equity currently. Nor would it result in anything other than a the tyrannical disarray of unmotivated citizens that appeared in the Marxist Soviet Union and People's Republic of China. No, the *process* of reaching equality, that democratic moment of embracing economic and social diversity, is the ultimate goal. And we're getting there.

With the focus of American society moving away from the strict political goals of democratic ideals, a new focal point lies in the advancement of math and the sciences, or the two collectively in their combined, practical application: technology. Society is relatively stable and static, but the digital world of the Internet is surely dynamic; billions of people surf the web and form complex online communities and manage the software behind these machines every day.

Most of this software nowadays remains proprietary, owned exclusively by a for-profit company. These are the programs with a price. Notable examples include Microsoft Windows and Apple's Mac OS.

But among the best-maintained software are the open-source software (OSS) projects. The Chromium browser and the Chromium operating system are OSSes, as are Ubuntu and the Apache HTTP service. Open source means that a software is open to contribution by anyone, and the code is available to everyone; edits only have to be tested and approved by a product's company, such as Google for the Chromium or Canonical for Ubuntu.

The public availability of the code opens up a range of new effects that proprietary software cannot engender. The first, and the most distinctive feature of OSS, is that the software becomes *free*ware. If any company tries to profit from it, another group can simply reproduce the project for free and attract all of the consumers. This attention, this public appeal, is key to its success: people salivate at the the prospect of monetarily "free" gizmos. While our government bestows freedom upon the people, there is no tangible effect; the folded money in a person's pocketbook securely held away from the grasp of a corporate monopoly, however, is a physical reminder of the free-ness of OSSes. There is no need for cost analysts for the OSS company or anxiety over bank-breaking—whoever should want the software should receive it. Anybody and everybody can use it.

Hence the birth of a communal equality. Equality is the foundation of democracy. Democracy guarantees freedom to all. This freedom is discussed by Ubuntu's informational page:

> "Free software gives everyone the freedom to use it however they want and share with whoever they like … We are able to give access to essential software for those who couldn't otherwise afford it – an advantage that's keenly felt by individuals and organisations all over the world" ("Our Philosophy | About Ubuntu").

The right of accessibility for *all* people, which in turn grants representation of *all* people, is fundamental to this idea of OSS. If software favors one group of people to form a digital oligarchy, a software's audience is too limited to be practical.

At the time Google Chrome came out eight years ago, the "bruising browser wars," as Google CEO Eric Schmidt put it, were already over a decade long. The world had recently emerged from the fierce '90s wars between Internet Explorer and Netscape Navigator, with the former victorious. Eight years ago, Internet Explorer had over sixty percent of the global browser usage. Now, Chrome has over half of the global browser usage and over sixty percent of the total desktop usage. And it did so in less than a decade and in a much more competitive market with Safari and Firefox as additional players.

How? It's open source, of course. Firefox also is open source and has settled into a comfortable third place for global usage. People didn't want to spend hundreds or thousands of dollars to get a PC in order to use Internet Explorer or a Mac in order to use Safari; they wanted to browse the web. Free of cost.

It's truly amazing what this type of product can accomplish. I use both of these for the majority of the time I spend on a computer; yet they don't cost a *cent*; you could get an infinite copies of this operating system and of this browser for a four-hundred dollar license to MS Office Pro. Or an app for a five bucks on the App Store. Or even a ninety-nine cent song in the iTunes store. Nothing with a price tag can compare.

Then it seems somewhat communistic. Everyone can own the same share of these products as they would like, and no one benefits more or less than anyone else. But this is false—OSS is not static, but highly dynamic. The users have the ability to change the software as they wish. It is not a company in the lead, changing elements to their best interests—it's the people. It is, in the modern sense, a system *for* the people, *by* the people, *of* the people.

If a duplicitous, closed source company decided to deliberately create flaws so that they could earn extra money from repairs, nothing is stopping them. Likewise, if a company is profitable enough to stop a breakneck pace of development, they are at their leisure to do so. The motivation to appease *others*—as in the case for a company developing software for *consumers*—is very different than *self-interest*—which drives OSS. The developers of Ubuntu and Chrome work fervently to have better software mainly for *themselves*—who wouldn't want the best software?—and this leads to the pleasant benefit of helping out everyone else as well.

But while this is all so optimistic—if only our natural rights and civil virtue could be embodied in a virtual, digital world—there are inevitably downsides to OSS. Companies of this sort do not gain much money from their products. Rather than earning money directly from sales of a product—the major source of income for paid-software—the profit for the small teams managing the OSS have to depend on money from support teams and special customizations. And, of course, free code means a higher vulnerability to hacking. Wikipedia is similarly susceptible to malicious or misinformed edits. However, considering that Wikipedia's information is generally reliable and Ubuntu arguably even more secure than Windows or Mac OS, the number of good-samaritans who patch up vulnerabilities in OSS far outnumber the malevolent hackers seeking to destroy others' information. That being said, the high pay and private code of Apple's or Microsoft's employees offer as much extra "security" as would closing America's doors to Muslims to stop terrorism, as some have suggested—little or none at all. Even this ostensible negative of payless work benefits by building selfless goodwill and, surprisingly, security.

To be open source means a specific subset of freedoms: Ubuntu's page on open-source specifically states that "the term open source was coined in 1998 to remove the ambiguity in the English word 'free'" ("Our Philosophy | About Ubuntu"). Thus, "opensourcedom" is a subset of what we call "freedom." Free from monetary concerns, from despotism, from lack of representation, from insecurity. Innovative, self-sufficient, daring. As our ties to America's revolutionary roots and to the humanities

slackens, the democratic potential of modern technology becomes ever closer in likeness to what Americans believe. America fostered these technological creations, but in each one there is a reflection of American beliefs. These technological products are the little Americas of the future.

"Our Philosophy | About Ubuntu." *Ubuntu*. Canonical Ltd., 2016. Web. 13 Nov. 2016.