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The Profession of IT Subscriptions

You no longer have control over digital objects you create. That may not be a bad thing.

MUCH OF OUR lives has been automated by the technology of subscriptions. Not only do we subscribe to needed services such as Internet, electricity, water, and other utilities, and to our traditional magazines and newspapers, we now subscribe to many other things such as cloud storage, music streaming, video streaming, automatic bill payments (autopay), automatic monthly shipments of vitamins, and professional organizations.

I came across David Mack's provocative essay in the *New York Times* calling attention to the extent that many things we depend on are provided only by subscription.^a He wrote: "As I've subscribed to more apps and streaming platforms, significant sums of my money tend to drift away each month without my ever thinking about it." From a review of his own subscriptions, he learned he had signed up for \$180 a month, which is better than the national average of \$270.

Mack also said that many providers collect not only a monthly fee, but they also harvest subscriber personal information, which they sell to advertisers. He provoked me to reflect on this topic. I became curious how much of my money is automatically transferred to providers. When I took inventory, I was surprised at the number of these channels I have opened



over the years. The accompanying table shows what I found for my monthly personal subscriptions, which are in line with Mack's. I discovered a sub-

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stantial traffic of automatic payments to maintain my professional work. I also saw that I have lost control over virtually all the digital objects I have created through my own efforts and which under the law belong to me.

The sticker shock hit when I saw what I pay for my professional work. All told, my subscriptions are \$939 a month. Phone and Internet connectivity, at \$476, are just over half that total. Do this exercise for yourself. You may be surprised.

In a way, the sticker shock should not be a surprise. Many of these expenses have been there all along to support my professional work. What

^a Mack, D. "The sneaky sticker shock of subscription culture." *The New York Times* (Nov. 19, 2023).

has changed over the past few years is that I have automated the payments rather than writing monthly checks. (You know the drill: “Switch to autopay and we’ll waive the \$10 monthly price increase.”) With the automation, the visibility into these expenses fades. It is easy, with a click or two, to sign up for new things, or to get autopay discounts on old things, without looking at the bigger picture.

In this column, I reflect on three features and implications of the “age of subscriptions”: slippery slope, control, and legacy.

A Slippery Slope

I first encountered personal computer software for sale in the late 1980s after I acquired my first Apple Macintosh computer. Software vendors sold floppy disks that had to be unlocked during installation with an access key provided at purchase. This mode of software distribution soon encoun-

tered difficulties when the hacker underground started distributing software that would unlock those disks. Vendors and hackers went on a long quest of cat-and-mouse: new ways of locking and new ways of defeating the locks. As the Internet matured and floppy disks gave way to downloads, alternatives to locking became possible. The download protocols provided assurance the software had not been tampered with by a third party. Some vendors increased their level of assurance with a “call home” feature, where the software would periodically contact the vendor’s authentication server and verify that the local user of the software was registered. If not, the software would lock up until the user provided a valid registration key.

Today many vendors let you download and install the software, which unlocks when presented with a valid registration key (license key). The software contacts the vendor’s server to bind the license key to the user’s machine. This produces a good solution for eliminating bootlegged copies of software but creates an inconvenience nightmare when the user upgrades to a new computer: deactivating all those bindings before transferring the software and data to the new machine.

The evolutionary path from floppy disks to downloadable software was long. The current generation of download protocols is quite good at assuring users that the software contains no malware and vendors that all users have paid their fees.

During this process, vendors started switching from one-time payments for a current version of the software, to periodic subscription payments to maintain access to the software. Vendors found that subscriptions with auto-renew increased their revenues because people forgot to cancel subscriptions they no longer used. Mack puts revenue increases from subscriptions relative to one-time sales at \$200M a year. He also adds that some vendors do not make their “cancel subscription” button easy to find.

Cloud computing has taken this trend a step further. Much software is no longer downloaded at all. Instead, the browser provides the user interface while the software executes on a remote server. Users of cloud comput-

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ing are starting to discover that the data they provide to the software is often retained on the server. There it becomes susceptible to theft by cyberattacks, and it provides more revenue to vendors when sold to advertisers.

Some vendors seem to go to extra lengths to lure users into subscriptions. Some software appears to be offered “free” but users soon find they cannot continue without paying a subscription fee after a brief trial period. Digital objects created during the trial expire when the trial ends. Some vendors in the app stores offer a free download; however, the app announces the user must pay a monthly fee to “unlock” the software.

The U.S. government recognizes that data uploaded into cloud apps cannot be access-controlled. Most government agencies prohibit users from uploading any sensitive government data into cloud apps including all the generative AI apps. Only if the cloud vendor enters an agreement with the government agency to store the agency’s data on isolated servers inaccessible to the rest of the cloud will the government approve uploading data into the cloud app.

Convenience is a strong motivation for the dominance of auto-renew subscriptions. We do not have to fear losing access to critical software by forgetting to renew. But convenience comes at a price. It costs us an opportunity to reflect on where we spend our money and therefore our priorities. As subscriptions pile up on our plates, we find ourselves sinking back into the feelings of overwhelm we thought subscriptions would relieve.

Control

In the subscription world, you no lon-

Table. Monthly subscriptions sample.

PERSONAL	
New York Times	4
Music streaming	5
Online puzzles	8
Amazon Prime membership	12
Amazon Prime channels	16
Video streaming	20
Print magazines	75
Local newspaper	88
TOTAL	228
PROFESSIONAL SOFTWARE	
Microsoft Office 365	10
Mathematica	15
Conceptdraw	20
Adobe Creative Cloud	20
TOTAL	65
PROFESSIONAL INFRASTRUCTURE	
Cloud storage	4
Antivirus	6
Dropbox	10
ChatGPT	20
Web and email hosting	40
Professional societies	90
Internet service	200
Phone service	276
TOTAL	646

ger control your own information. When I create a Word document or Excel spreadsheet, do I really own it? Law grants me the copyright, but this has become an illusion. I create many documents in Word and store them on my hard drive. After a few years, the file format is no longer supported by Word and I cannot open the documents. For a while I retained earlier versions of Word that could open the old documents. But that stopped working when my current operating system became incompatible with the older software. Nowadays, I have had to resort to open source software (for example, Libre) that can read the old formats and save the files into the newest format. Even this is insufficient to guarantee access to my own documents. If I fail to keep my Office 365 subscription active, Word will not run at all and I cannot edit my own documents. The same is true for a growing body of other software (Adobe, Mathematica, and so forth).


I am a regular user of Dropbox, which allows me to back up my documents remotely and also access them

In the subscription world, you no longer control your own information.

from anywhere. It is very convenient. I do not have to worry about making backups or the protocols for transferring files to new devices. But if I fail to pay my Dropbox subscription, all that remains is the local copy of the shared Dropbox folder—no backup or transferability. The situation is more dire with other vendors of cloud storage that do not provide local copies. Most of my huge library of photos is in cloud storage but not on my machine. If I fail to maintain my storage subscription, they all disappear. No more photo library. And of course, if I fail to maintain my monthly Internet access subscription, I am completely cut off

from all software vendors and storage services.

Legacy

After my death, my lifetime accumulation of Internet stuff will disappear after my relatives and friends stop paying the subscription fees for the sites that host my legacy files. Maybe this is a good thing. All the worthless detritus I have created will be automatically expunged from the human record when I can no longer pay my subscriptions. My heirs do not have to pore through my files to discard the worthless ones. Everything disappears automatically when the subscription expires. On the other hand, anything I create that was worthwhile will become part of someone else's record and live on. As long as they pay their subscriptions. 

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